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Graduate Management Project:
Is Naval Hospital Bremerton as Prepared as They Should be to
Respond to a Man-Made or Natural Disaster?

Presented to A. D. Mangelsdorff, Ph.D., M.P.H.

In partial fulfillment of the requirements for
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By
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Abstract

Five years after the events of September 11, 2001 should mark an era of Military Treatment Facilities' preparedness to respond to natural or man-made disasters or emergencies. Is Naval Hospital Bremerton as prepared as they should be? There have been many programs developed to streamline and help with preparedness for medical facilities. Has Naval Hospital Bremerton integrated these programs in their Emergency Management Program? Some variables of preparedness may include: personnel, resources, communications, policy, or planning. Has their policy and guidance been updated and does it reflect the requirements of higher authority? Is the staff adequately trained? Are there adequate relationships with civil agencies? This paper will look at how prepared Naval Hospital Bremerton is from an executive administrative view.

Disclaimer

The opinions or assertions expressed in this paper are those of the author and are not to be construed as reflecting the official policy or position of Baylor University, U.S. Army Medical Command, Naval Hospital Bremerton, Department of the Army, Department of the Navy, Department of Defense, or the U.S. Government.

Ethical Considerations

No personal identifying information was used during this study. The author declares no conflict of interest or financial interest in any product or service mentioned in this paper.

Introduction

Disaster management and emergency preparedness is not a new issue. Abraham Lincoln was quoted saying, "We live in the midst of alarms; anxiety beclouds the future; we expect some new disaster with each newspaper we read" (WorldWideLearn, 2006). The first significant documented terrorist event against the United States was the high-jacking of a National Airlines plane on May 1, 1961 (U.S. Department of State, 2004). Although disaster awareness has and always will be around, recent and current events have increased the awareness of the importance of being prepared and to be able to react efficiently and effectively to natural or man-made disasters—including terrorism (Cosgrove, Mollie, Kohri, Edbert, Green, & Feuersteinl, 2004).

What is considered a disaster? Pan American Health Organization (2000) gave the following criteria to the definition of disaster.

1. Usually sudden or unexpected
2. Intensely alters the beings, objects and localities
3. Results in loss of life and health in the local population
4. Causes severe environmental damage and the destruction or loss of material goods
5. Results in traumatic disruption of normal patterns of life

6. May be local, national, or even regional in scope
7. Gives rise to the need for immediate intervention and humanitarian aid (p. 7)

Although not a new concept either, terrorism is also an enormous threat. The United States was rudely reminded that disaster preparedness and emergency management is of utmost importance after the terrorist incidents of September 11, 2001 ("9/11"). The security bubble that many Americans lived in was gone and most Americans now realized that the United States was vulnerable to terrorist attacks (Allison, 2004). According to infoplease® (2006), as of April 2006, the United States has officially declared 42 groups as Foreign Terrorist Organizations. The U.S. Department of State maintains a list of all designated foreign terrorist groups or organizations (U.S. Department of State, 2005). As a result of recent threats and events, the Department of Homeland Security (DHS) was founded in March 2003. One of the DHS's primary missions is to take the lead in ensuring that emergency response individuals are prepared for any large scale emergency or natural disaster (U.S. Department of Homeland Security, 2004b).

The US Department of Health and Human Services and the World Health Organization has also identified the H5N1 avian flu virus as a possible threat that could cause a national emergency

through a pandemic and have drafted influenza pandemic preparedness plans (Assistant Secretary of Defense, 2006).

The increase in awareness has also pushed more organizations into wanting to be better prepared to deal with emergency management. This is evident by WorldWideLearn (2006) stating there are an expected 28.2% increase in emergency management specialist jobs and an 18.3% increase in first line supervisors and managers of this field from 2002 to 2012. The question remains, however, are emergency responders as prepared as they should be, five years after the impetus for the renewed drive for preparedness, for any new or future emergencies or disasters?

Planning and prevention for such emergencies should be a coordinated effort of federal, state, county, and local agencies (Cosgrove, et al., 2004). Planning and preparedness for disasters and emergencies are currently tied to the highest levels, such as the Department of Homeland Security (DHS), Federal Emergency Management Agency (FEMA), National Incident Management System (NIMS), and the National Response Plan (NRP). The first protocol listed on the DHS website is to "Save lives and protect the health and safety of the public, responders, and recovery workers" (U.S. Department of Homeland Security, 2004b). Those who respond to disasters and provide the emergency care and services should continually remind themselves of the

importance of preparedness and continually strive to enhance it. One of these emergency services includes healthcare.

Has the motivation to be prepared to react to disasters or emergencies decreased as a result of the decreased stimuli or perceived threat of disaster? The proposed 2007 budget cut for homeland security may suggest this—especially for the medical responders. The cuts could take away up to \$9 billion from local firefighters, policeman, and medical responders (Meeks, 2004). The Joint Program Office for Chemical and Biological Defense also lost approximately \$530 million dollars in its funding to provide military bases with the special equipment needed to properly handle chemical, biological, and radiological hazards before all the bases were supplied with the needed equipment through the Guardian Program (McCullum, 2006).

Conditions that prompted the study

It should be obvious that the worst time to realize that you are unprepared to respond to a disaster is when a disaster strikes. This is especially true for medical and healthcare entities. There is no going backwards or trying again when it comes to people's lives and preparation can lead to successful outcomes. Federal organizations provide different roles to the community and people may have expectations from them that cannot be attained due to Federal regulations such as the Posse Comitatus Act of 1878. Hospitals must be the best prepared due

to their role in disaster response (American Hospital Association, 2005). A thorough review of the preparedness of federal healthcare organizations, as well as any healthcare organization, is required to ensure the abilities of these agencies to provide effective and efficient healthcare services when needed during a natural or man-made disaster or emergency (Pan American Health Organization, 2000). There was a great federal push for readiness post September 11, 2001. This, again, was noted from the formation of the Department of Homeland Security. These requirements for preparedness and readiness fell to hospitals as well. With the lack of constant and or frequent disasters and emergencies to provide a continual reminder of how important it is to be prepared, and with perceptions that budget cuts are due to decreased priorities in emergency management, there may be degradation in the preparedness of healthcare facilities' ability to respond. Naval Hospital Bremerton wants to discover if they too have suffered a degradation of preparedness before they find out in an actual situation.

Government agencies use traditional phrases, new terminology and acronyms. Appendix A is included as a reference for some of the terminology that may need further explanation throughout this paper.

Statement of the Problem or Question

The research question "Is Naval Hospital Bremerton as prepared as they should be to respond to a man-made or natural disaster or emergency?" has many issues associated with it. Initially the question included responding effectively and efficiently. The terms effective and efficient are difficult to define without actually going through a scenario and grading effectiveness and efficiency—regardless of how they might be defined. Since this analysis is an effort to ascertain preparedness from a person outside the organization, and to cause as little interruption as possible to the organization, it was decided that no actual scenario based testing of preparedness would be preformed. The terms effective and efficient were removed from the research question. It is also important to realize that this analysis is based on preparedness from an administrative viewpoint from an entity outside the organization.

This administrative viewpoint is looking at the preparedness of Naval Hospital Bremerton as seen from executive leadership.

Next, the term "prepared" needs to be defined? Placed in a conceptual model in its most simplistic form, "prepared" may best be defined through an analysis that may look like that in Figure 1.



Figure 1. Conceptual model of preparedness to respond

As can be noted in Figure 1, preparedness is dependent upon many variables. Each of these variables represents an area in preparedness and has some influence in it. One of the major issues with the level of preparedness of Naval Hospital Bremerton has revolved around the recent deployment of the Emergency Management Officer (EMO) and the stagnation of forward progress of the program. A second major issue of preparedness of the program is that the EMO is not a primary full-time job. It is a collateral, part-time job. This greatly dampens the opportunities for continual analysis and improvement of the program.

Literature Review

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) reported, after convening a 29 member panel of experts, that the reasons stated for lack of

preparedness in hospitals were nurse shortages, lack of funding, and the cost of malpractice insurance that prevent resources from being available (Potts 2003). Gerencher (2006) focuses primarily on emergency rooms but states that healthcare organizations must address issues in preparedness. These issues include increasing surge capacities, controlling patient flow, and increasing federal funding for hospital disaster preparedness. Cosgrove et al. (2004), through studies done at The Johns Hopkins University, state that "Hospital planning for disaster response is of utmost importance" (p.1). The California Hospital Association (2006) has determined what it feels to be important areas in emergency preparedness. The fact that they offer seminars to help train on topics that they feel are important may warrant this research to look at some of these areas. These include:

- Federal and state preparedness and response
- Medical surge capacity and altered standards of care
- Alternate care sites
- Authority of local and state public health officers
- Emergency preparedness planning—best practices from California hospitals
- Lessons learned from hospitals that survived Hurricane Katrina
- National Incident Management System compliance expectations

- Human resource legal issues and innovations in training
- Emergency and crisis communications
- Disaster triage

Preparing for other possible catastrophes, such as Y2K, was easy in respect to disaster preparedness (American Hospital Association, 2000). Y2K had a known time that it was going to happen and the timeframe of most disasters are unpredictable or unknown. The extent and cause of a disaster may be unknown as well. These reasons, however, should not preclude the importance of addressing preparedness and making it a priority for healthcare organizations. American Hospital Association (2000) also reiterates that JCAHO requires emergency preparedness drills be completed semiannually—another organization that further stresses the importance of proactive preparedness measures. JCAHO's requirements for emergency management fall under the Management of the Environment of Care chapter in the *2006 Hospital Accreditation Standards* (Joint Commission on the Accreditation of Healthcare Organizations, 2006). Drills are expected to assess the requirements of JCAHO. Below is a list of some of JCAHO's 21 major competencies:

- The hospital has an emergency management plan. The plan provides-
 - o process for initiation to recovery phases and job descriptions

- o notification of external agencies
- o processes for coverage of all staff functions
- o management of activities such as staff support, medical care, family support, security and communication with the media
- Establishment of alternate care sites
- Patient evacuation, tracking, and transportation
- Cooperation with external healthcare organizations
- Drills conducted with the community expectations-
 - o delineate the hospital's priorities within the possible emergencies in the community
 - o help explain the hospital role and relationship with the community during a community-wide emergency
 - o form a command structure for any emergency that is linked to the command structure of the community

"You have to be like an insurance salesman as the Emergency Management Officer--continually selling the idea of the costs associated with emergency preparedness to the organization and getting them to agree that preparedness is the best insurance plan" (R.C. Morash, Naval Hospital Bremerton's Emergency Manager Officer, personal communication, August 29, 2006). "It is not a matter of if but when [a disaster will occur]" (California Hospital Association, 2006). Many other organizations and agencies share this same view. Hospitals have to be prepared to

deal with disasters that will happen. All that is needed to be prepared will be worth the effort and resources when a disaster occurs (R.C. Morash, personal communication, August 29, 2006). When that time arrives, however, it is too late to realize that preparedness should have been addressed earlier. It is probably most likely that the costs of being prepared will be less than the costs of not being prepared.

Command and Support

By November 2005, Naval Military Treatment Facilities no longer fell under authority of the Fleet Commanders and Navy Medicine Command and Support was restructured (Chief of Naval Operations, 2005a, 2005b, & 2005c). Appendix B is a graphical representation of the new Command and Support structure for Navy Medicine. These are additionally annotated by Echelon levels to reflect their precedence in the command and authority structure. Echelon 1 in the chain-of-command is the Chief of Naval Operations and is the top of the command and support for Navy Medicine. The Bureau of Medicine and Surgery (BUMED) is designated as Echelon 2. The Chief, Bureau of Medicine and Surgery is the Surgeon General of the Navy. The Surgeon General of the Navy has military command of all Navy medical and dental commands and is responsible for the training and readiness of these activities (Chief of Naval Operations, 2006). The Surgeon General of the Navy's vision for Navy Medicine in 2006 is that:

Navy Medicine will keep Sailors and Marines fit to fight, serve as a defensive weapons system protecting the warfighter and deterring threats, will provide flexible medical support in combat overseas and emergency responses at home, and will provide incomparable health services economically to all whom we are honored to serve (Arthur, 2004, p. 1).

To accomplish this he has set forth five top priorities. The top priority of the Surgeon General of the Navy includes that "Our MTFs must be prepared to respond to any contingency, to provide expert care to casualties returning from theatre, and be ready to support the Nation's needs in collaboration with the National Disaster Medical System" (Arthur, 2004, p. 1).

The new Command and Control structure is next broken down into four regions of authority, delineated as Echelon 3 and created to allow flag officer level leadership to have command and control over their respective medical treatment facilities. A Flag Officer is a Naval Officer that is at the Grade of O-7 or higher. These new regions are Navy Medicine West, Navy Medicine East, Navy Medicine National Capital Area, and Navy Medicine Support Command. This is also depicted in the organizational chart in Appendix B. Under Navy Medicine West, Navy Medicine East, and Navy Medicine National Capital Area are dental and medical treatment facilities. Navy Medicine West includes all

west coast and Pacific area MTFs, Navy Medicine East includes all east coast, gulf coast, Great Lakes and European MTFs, and Navy Medicine National Capital Area has command over the Naval Medical Center and military health clinics in Bethesda, Maryland, and Quantico, VA. Navy Medicine Support Command includes command and control over medical support activities such as the Naval School of Health Sciences, Naval Operations Medicine Institute, Environmental Health Centers, Navy Drug Screening Laboratories, Naval Research Laboratories and Units, Naval Medical Information Management Centers, and other commands. Naval Hospital Bremerton reports to Commander, Navy Medicine West and is designated as an Echelon 4.

Naval Hospital Bremerton is designated as a teaching hospital. This is considered the third category in Navy hospital categories following the Navy Medicine Regional Command and the Naval Medical Center (NMC) (Chief, Bureau of Medicine and Surgery, 2006b). These categories are defined in Appendix C. As noted in this same reference, the NMC is the only Navy activity that is required to have an Emergency/Preparedness Management Department. JCAHO uses EC.4.10 as the base reference number to identify requirements for this program. Naval Hospital Bremerton does, however, have an Emergency Management Program. The Environment of Care Committee has oversight of this program and it is run by two active duty Naval Officers as a collateral

duty. Analysis of this program is a major emphasis for this research project.

As noted earlier in Figure 1, preparedness for disaster or emergency may be influenced by policy, resources, personnel, communications, and planning. First we will look at policy.

Navy Policy and Guidance

As noted earlier, Naval Hospital Bremerton is an Echelon 4 Naval command under BUMED and Navy Medicine West (Chief of Naval Operations, 2005b). With the recent changes in the command and support structure, BUMED is also revising its policies and guidance for all MTFs that they govern. They are currently working on the BUMEDINST 3440.XX which is out in draft form at the time of this research (Chief, Bureau of Medicine and Surgery, 2006a). The draft may be ready for final review as early as October 2006 (S.T. Schoen, Navy Medicine Office of Homeland Security, personal communication, August 21, 2006). It will replace the latest instructions NAVMEDCOMINST 3440.4 dated March 28, 1989 and the shore facility component of BUMEDINST 3400.1 dated February 28, 1994 as noted within the instruction. Note how old the previous instructions are. Even since the events of September 11, 2001 the guidance has not been revised. This new instruction, as the military refers to policy in written form, will be the baseline for all BUMED activities in regards to their Emergency Management Program. In essence, this

means all Navy Military Treatment Facilities. When finalized and released, this instruction must be looked at as part of an environmental analysis as it is the outside force that will drive Navy Medicine's Emergency Management Program and their response to any and all hazards that may result from a disaster or emergency. This new instruction is designed to bring together and reference 25 other Navy, Federal and Civilian instructions, policy, and guidance and use them to develop and maintain the Emergency Management Program for Navy Military Treatment Facilities. It will also be the foundation of MTF specific policy and guidance, such as Naval Hospital Bremerton's Emergency Management Program as reflected in NAVHOSPBREMINST 3440.2L (2004).

Appendix D is a graphical representation of the BUMEDINST 3440.XX (draft). It is broken down into 14 main categories that the Chief, Bureau of Medicine and Surgery has directed that all Navy Military Treatment Facilities must focus on, as a minimum, to develop, maintain, and sustain an effective Emergency Management Program (EMP).

These categories are as follows:

1. Program Management
2. Personnel Categorization
3. Tiered Implementation
4. Assessments

5. Interoperability
6. Preparedness
7. Planning
8. Training
9. Equipment
10. Exercise and Evaluation
11. Mitigation and Prevention
12. Response
13. Recovery
14. Sustainment

After the release of the final guidance, each of these areas should also be focused upon in an internal analysis of the hospital to see how Naval Hospital Bremerton is complying with the new standards.

National Incident Management System

The National Incident Management System (NIMS) was developed and is administered by the Director of Homeland Security. Presidential Directive (HSPD)-5, *Management of Domestic Incidents*, was what authorized and directed the creation of this system on February 28, 2003 and requires that all Federal, State, local and Tribal governments adopt NIMS and use it in their emergency programs (U.S. Department of Homeland Security, 2004a). It is the baseline guidance of principles and concepts for collaborative efforts between agencies in response

to disaster or emergency and relates organizational processes for effective and efficient incident management. It is also the framework of the National Response Plan. Agencies must use the National Response Plan (NRP) for specifics of operational incident management as NIMS does not address specifics on this. NIMS is a template for all governmental, nongovernmental, private and public organizations to effectively work together when dealing with any type of hazard of any size. It was developed to allow better coordination and collaboration between agencies in incident management through all jurisdictional levels and functional disciplines (U.S. Department of Homeland Security, 2004a).

As outlined in the U.S. Department of Homeland Security (2004a), NIMS has five primary components that are the foundation of the template for all organizations to follow. These components are command and management, preparedness, resource management, communications and information management, supporting technologies, and ongoing management and maintenance. The command and management component consists of the integrated command system, multi-agency coordination systems, and public information systems. Preparedness includes seven subordinate categories which are planning, training, exercises, personnel qualification and certification, equipment acquisition and certification, mutual aid, and publications management. Finally,

the communications and information management component includes incident management communications and information management. All of these components combine to create a single system which all agencies will use. This will allow understanding and effective collaboration of any incident response by any agency from any other agency. By standardizing command and management, preparedness, resource management, communications and information management, supporting technologies, and ongoing management and maintenance, all organizations will be able to effectively and efficiently work together in response to a disaster or emergency because their languages, protocols, and procedures will be the same. It will also streamline the response when local level response is augmented with auxiliary forces or help. To aid in this standardization

All federal, state, local, governments, private sector and non-governmental personnel with a direct role in emergency management and response must be NIMS and ICS trained. This includes all emergency services related disciplines such as EMS, hospitals, public health, fire service, law enforcement, public works/utilities, skilled support personnel, and other emergency management response, support and volunteer personnel... (NIMSONline, 2006, p. 1)

National Response Plan

The National Response Plan is designated as the one reference for all organizations for specifics from planning to recovery combined in one reference (U.S. Department of Homeland Security, 2004b). It is used as the reference for specifics of operation incident management and allocation resource plans vice the core set of incident principles in the NIMS (U.S. Department of Homeland Security, 2004a). The National Response Plan replaced the Federal Response Plan in December 2004 (Johnson, 2005). U.S. Department of Homeland Security (2004a) states that President Bush:

directed the development of a new National Response Plan (NRP) to align Federal coordination structures, capabilities, and resources into a unified, all discipline, and all-hazards approach to domestic incident management.... The end result is vastly improved coordination among Federal, State, local, and tribal organizations to help save lives and protect America's communities by increasing the speed, effectiveness, and efficiency of incident management. (p. i)

The National Response plan has been invoked twice since its inception. The first time it was invoked was August 30, 2005 in response to Hurricane Katrina. The second time was September 22, 2005 in preparation for Hurricane Rita (Wikipedia, 2006). Its

effectiveness is continually assessed through the preparedness and management and maintenance components of the NRP. These assessments start with the NIMS Integrations Center, which provides strategic management and oversight of NIMS, and ends with the local agencies. Assessments are done through training, exercises, credentialing and certification of equipment and people, inspections and evaluations, and after action inquiries and reports.

National Disaster Medical System

The National Disaster Medical System (NDMS) originated in 1984 after an executive order, by the President of the United States, declared the formation of it the year before. The Department of Veterans Affairs (VA), Department of Defense, Department of Health and Human Services, and the Federal Emergency Management Agency all work together to make NDMS work. As of 2006, NDMS falls within the U.S. Department of Homeland Security, Federal Emergency Management Agency, Response Division, Operations Branch. Until the formation of NDMS there was no type of large scale methodology or orderliness in response to a national disaster or emergency. Its formation was for two primary reasons. The first reason was to create a system to be able to utilize civilian hospitals and their inpatient beds in case of a domestic disaster. This would be done if the hospitals and healthcare facilities in the affected area were

overwhelmed or destroyed and could not keep up with the medical needs of the community. The second reason NDMS was created was to pre-designate, train, and maintain medical teams, now known as Disaster Medical Assistance Teams (DMATs), that could be activated and go to the areas that needed their medical services during a national disaster or emergency. The DMATs consist of various groups of medical specialties ranging from medical assistant and nursing teams to mortuary response and veterinary services (U.S. Department of Homeland Security, 2006a).

Ultimately, NDMS is intended to support State and local medical resources by jointly supporting direct medical care, patient evacuation, and inpatient or definitive care for domestic issues and provide supportive medical care for overseas military and VA healthcare systems (U.S. Department of Homeland Security, 2006b). In other words, NDMS is designed to augment the Nation's medical response capabilities for a domestic disaster. These disasters may include terrorism, major transportation accidents, natural disasters, or even technological disasters. Hurricane Katrina was the first time that all three functions of NDMS were activated simultaneously--direct patient care, evacuation, and definitive care (U.S. Department of Homeland Security, 2006a).

The Military Treatment Facilities must receive permission to use government resources in civil cases except in some special circumstances. An example of a special circumstance may

be a two car accident outside a Naval facility with medical response capabilities. Navy resources could be used at the discretion of the Commanding Officer and the scene turned over to civil authorities if and when appropriate. Otherwise, authority for dissemination and use of these government resources must come from the NDMS which is approved strictly by presidential decree (R.B. McNeil, personal communication, August 21, 2006). This notification will come from the Federal Coordinating Center for each region through NDMS. Madigan Army Medical Center is the Federal Coordinating Center (FCC) for Naval Hospital Bremerton and will disseminate information and direction received from the Navy Medicine Office of Homeland Security through NDMS (S.T. Schoen, Navy Medicine Office of Homeland Security, personal communication, August 21, 2006). The DOD and VA run the FCCs. The FCCs are responsible for maintaining and eliciting participation from non-federal hospitals, usually those with 100 beds or more, and maintain these participating hospitals into a single database. The FCCs then coordinate the availability of the beds through NDMS when needed (U.S. Department of Homeland Security, 2006b). Other than directions and coordination through NDMS, Madigan is not part of Naval Hospital Bremerton's command and support structure. They are the Emergency Operations Center for military commands in their area to include McChord Air Force Base.

The effectiveness of NDMS is assessed via training exercises, done annually through the FCC, and through after action and post response evaluations.

Hospital Emergency Integrated Command System

The Hospital Emergency Integrated Command System (HEICS), was developed by the San Mateo County Department of Health Services Emergency Medical Services Agency (San Mateo County Department of Health Services Emergency Medical Services Agency, 1998) and is the standard by which medical facilities are able to find a logical structure, defined responsibilities, and direction for responding to a disaster or national emergency. HEICS was written in 1991 by the Orange County Emergency Medical Services. The latest version, version 3, is dated June 1998. HEICS allows medical facilities to be consistent with all other healthcare facilities in response and protocol across all different medical facilities. It is not intended to be a disaster plan. It is intended to show how the medical facility will operate after an emergency is declared and the Hospital Emergency Incident Command System is initiated. HEICS gives a tailored structure for the medical facility's Incident Command System which is broken into five main groups. These groups include the Command Center, Logistics, Planning, Finance and Operations. Additionally, they have specific responsibilities and are further broken down--giving specific job actions to all

areas needed to respond to an "all-hazards" response in a healthcare facility. These smaller groups can be seen in Appendix E. An "all-hazards" approach represents the ability to respond to any type of emergency, regardless of the size or cause (San Mateo County Department of Health Services Emergency Medical Services Agency, 1998).

The HEICS helps to keep the hospital open and continue providing care. It is an incident management system that is tailored to medical facilities in processes and job descriptions. It helps to delineate every job description that may be needed and is tailored to each individual organization.

All military hospitals are not currently using HEICS but some are moving toward it. Naval Medical Center San Diego has HEICS integrated into its emergency management plan. Naval Hospital Bremerton is one of the Medical Treatment Facilities that is adopting HEICS.

Continuity of Operations Plan

A military command must be ready to perform all Mission Essential Functions (MEFs) with as little disruption as possible to completing that mission or to the organization as a whole. To help this happen, guidance is set forth under the Continuity of Operations Program (COOP) (Secretary of the Navy, 2004). Other references may call this the Continuity of Operations Plan.

The program, at a minimum, must address the areas as noted in Figure 2.

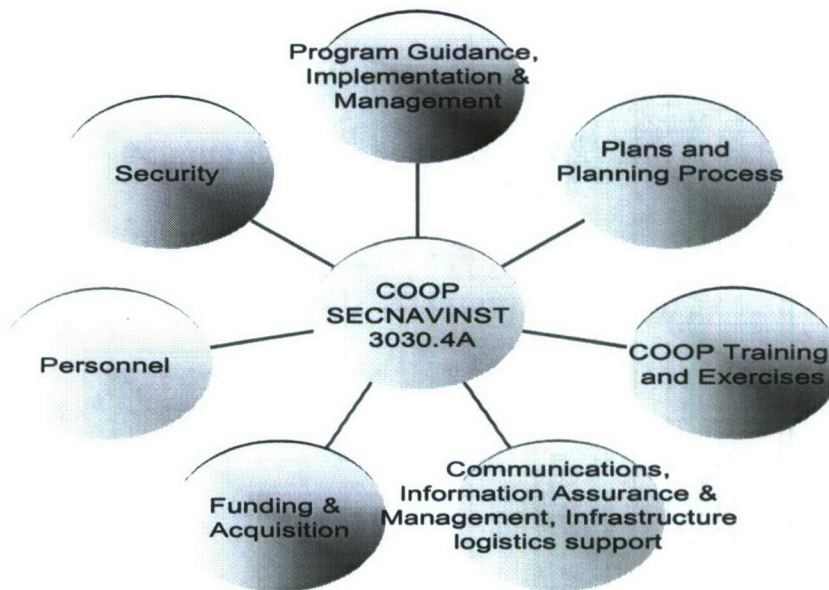


Figure 2. Secretary of the Navy Instruction 3030.4A: Continuity of Operations Program Minimum Requirements

Collaboration with External Agencies

"The Department of Defense (DOD) and component services are the key participants in the national strategy of deterrence, protection, prevention, and defense against any and all threats to homeland security" (Chief, Bureau of Medicine and Surgery, 2006a, p. 2). In the event that a disaster or emergency happens, however, the State, County, and local agencies will be the immediate Incident Commanders and primary response. Vice Admiral Richard H. Carmona, while Acting Assistant Secretary of Health

and Navy Surgeon General, confirmed this in a speech given on the USNS Mercy in July 2003. He stated "that all disasters are local events. So we have to work with the communities and link the local systems to the state and national systems" (U.S. Department of Health and Human Services, 2004, p. 1). This means that the local fire departments will usually be the Incident Commanders and police and emergency medical services will be the first responders. There has to be communication and collaboration with and between these agencies. Some of the agencies that must work together in the response to disasters will include the Military Treatment Facilities, Civilian Medical Facilities, Regional Operations Centers, and State and County Emergency Operations Centers. Naval Hospital Bremerton has to have relationships and collaborate with these organizations when needed. Figure 3 shows the current relationships that exist with agencies in Kitsap County, Washington. The dashed lines show relationships while the solid lines delineate reporting authority.

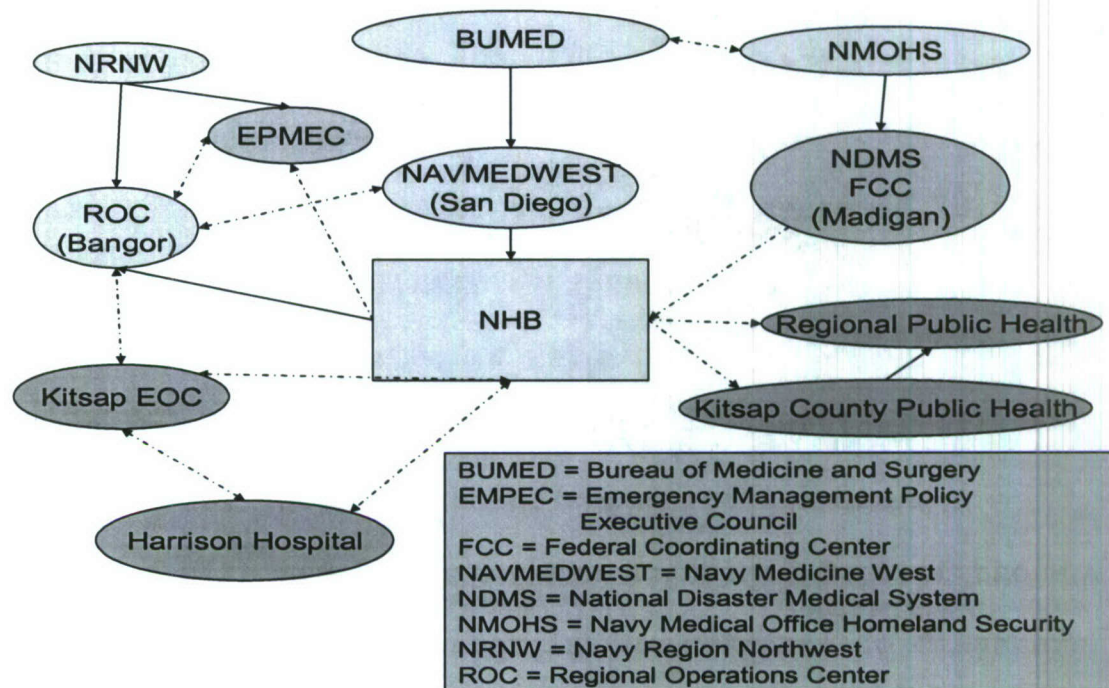


Figure 3. Kitsap County emergency management organizational relationships.

Purpose

The purpose of this research is to ensure Naval Hospital Bremerton is prepared to meet the expectations demanded from a healthcare facility in response to a disaster or emergency before it is required in a real life situation. It is difficult to put this into a traditional hypothesis form, the Hypothesis (Y) is a function of variable (X), or $Y=fX$, as this will be primarily a qualitative type study. The purpose is to decide how prepared Naval Hospital Bremerton is, where its preparedness could be improved, and where the hospital can continue business

as usual. The research will possibly reveal areas of weakness to concentrate on, or improve, to enhance the response and save lives. The purpose also is to investigate areas not previously thought of. Additionally, this research may also help update Naval Hospital Bremerton's policies, guidance and instructions to conform to the latest direction handed down by those whom they report to, for example the Bureau of Medicine and Surgery. The results of the research paper will serve as an educational and informational foundation for all involved with the preparedness of Naval Hospital Bremerton's response to a disaster or emergency. This research and analysis is not meant to put blame on people, or programs, or lead to disciplinary actions. It is meant for awareness and focus for better preparedness.

The expectations that Naval Hospital Bremerton should meet will be dependent on those constructs, and possibly others, that were noted in Figure 1 or Appendix D. The ideas of Total Quality Management suggest that all organizations can benefit from improving quality and should always strive for excellence (Total Quality Management: Essentials of TQM, 2006). These ideas can apply to emergency preparedness as well. The preparedness of Naval Hospital Bremerton to respond to a disaster will ultimately affect the outcomes of that response. Everything

should be done to give Naval Hospital Bremerton the best opportunities for success.

Finally, it is important to realize that the purpose of this research is not to determine what causes Naval Hospital Bremerton to be prepared but rather to determine how prepared Naval Hospital Bremerton is as reflected by predetermined constructs of preparedness. These constructs will be drawn from those reflected in Figure 2 and Appendix D. There may be a by-product of some causes of preparedness but that is not the primary purpose. Many hours have been put into the guidance provided to all Military Treatment Facilities on what they need to do to be prepared. The objectives of this study are to review and analyze this guidance and gather information from those who have been working directly with or affected by the guidance and programs.

Method and Procedures

The research will begin with an environmental analysis. Swayne, Duncan, & Ginter (2006) explain that it is important to do an environmental analysis because the abilities to read shifts in the environment are a basis for strategic thinking and planning. If an organization does not know what is going on around them, they cannot forecast effectively and aim their organization in the best direction. It also helps to organize the organization to do an effective internal analysis. An

environmental analysis may consist of looking at what is going on around healthcare facilities and, for this research, how it is influencing the decisions of emergency management. The environmental analysis is done through environmental scanning, monitoring, forecasting and assessment. It will also help to identify present and future issues that affect the organization. The environmental analysis for this research will start with a stakeholder analysis and brainstorming (through interviews). A stakeholder analysis is represented in Figure 4.

Stakeholder Analysis

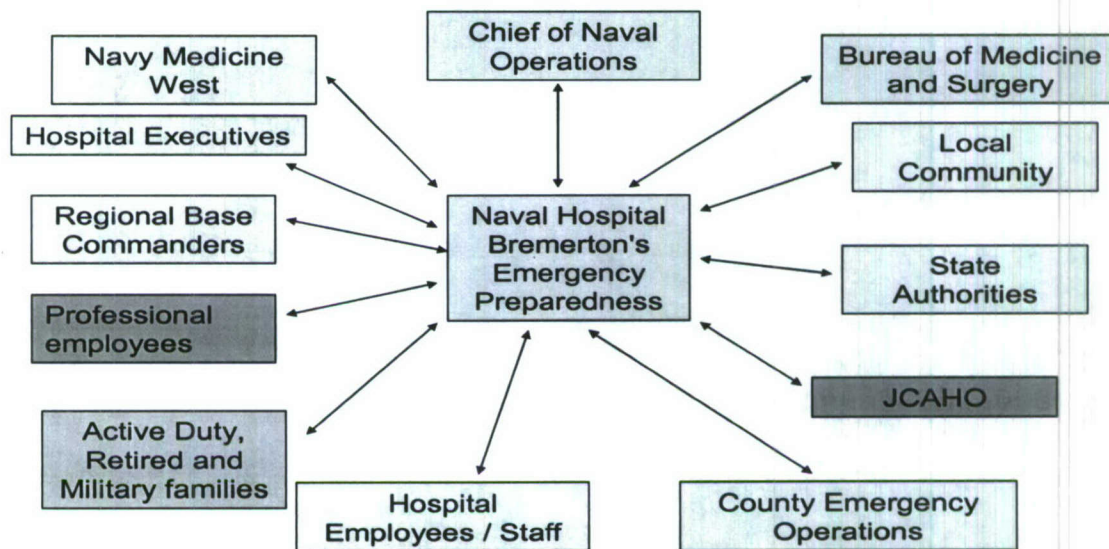


Figure 4. Stakeholder analysis for Naval Hospital Bremerton's Emergency Preparedness.

Stakeholders, as defined by Fleisher & Benoussan (2003), are "important groups of people or individuals who can exert a significant amount of influence on the organization" (p. 298). They can also be those who are affected by the organization in some manner. The stakeholder analysis helps to identify these groups or individuals. A stakeholder analysis is used in this research because a stakeholder analysis allows the management of organizations by tailoring actions and behaviors as they affect those who have an interest in the organization and the how those actions may also affect the stakeholder's satisfaction of the services they provide (Fleisher & Benoussan, 2003). When looking at preparedness, this is an important aspect.

The economic and social demographic areas will be looked at while within the environmental analysis. This is sometimes referred to as the service area analysis and looks at who the organization is serving and how does this influence how they respond and need to be prepared.

Next there will be a competitor analysis. A competitor analysis looks at the potential strengths and weaknesses of its competitors, or other organizations, performing the same services (Fleisher & Benoussan, 2003). It will not be used in this research to decide competitive strategies but rather to see what others in the area are doing for emergency preparedness and how Naval Hospital Bremerton can capitalize on that and

coordinate efforts to maximize preparedness. This is sometimes done using a SWOT (Strength, Weaknesses, Opportunities, & Threats) analysis. A SWOT analysis is a very important strategic management tool. As described by Fleisher & Benoussan (2003), the strengths and weaknesses tell the organization what they can do. The external opportunities and threats tell the organization what they might do. Through answering these questions the organization can decide what they want to do and what others expect them to do. Next, the organization should decide what capabilities and resources they want to have, what should they be concerned about, and how they can satisfy the expectations of their stakeholders. A SWOT is not appropriate for this external analysis because the external agencies will not be analyzed to the depth required for the SWOT to be most effective.

A large part of the research will include the next step, the internal analysis. Like the external analysis, this analysis will begin with a Stakeholder Analysis. A SWOT analysis will also be preformed as it is a good tool for the internal analysis. The SWOT will be looking at the inside of the organization, Naval Hospital Bremerton, and its operations and the information from the SWOT will also help with the identification of appropriate strategies to be used later in the analysis. The value chain, as described shortly, will also be used to see if it can elicit any areas to look at in more depth.

The modified healthcare value chain of Swayne, Duncan, & Ginter (2006) will be used versus the more widely recognized value chain of Porter. This is because the modified healthcare value chain is more specific to healthcare. Healthcare provides a service delivery role as well as a support service role. The service delivery role is also accomplished through the support services of the organization. The modified value chain takes into account organizational culture, organizational structure, and strategic resources. All of these aspects are looked at while analyzing the pre-service, point-of-service, and after-service areas of the organization.

The two parts of the modified value chain, Service Delivery and Support System (and its subcategories), can be related to emergency management and preparedness. Under Service Delivery, Pre-Support is the planning, funding, training. Point of Service is the actual disaster response or drill scenario. After-Service can be debriefing, lessons learned, fixing inadequacies or getting needed resources. Under Support System, organizational culture, organizational structure, and strategic resources are all important to emergency preparedness. The organizational culture will encompass shared assumptions and values of emergency preparedness and behavioral norms. Organizational structure will include facility and equipment resources, implementation of leadership roles and the ability of leadership

to carry those roles out. Finally, the strategic resources will include the finances, adequate numbers of people, the training of those people, and information and technology.

Directional Strategies will be looked at next. The organizational mission, vision, values and goals are all directional strategies. Directional strategies are important because they help make clear to both external and internal stakeholders what the organization does, how they do it, and can help an organization decide what or what not to do (Allison & Kay, 2005). The organizations should not be doing things that are not in their mission, vision, goals, or values. Analysis of directional strategies help organizations complete their mission, in this case emergency management, by relating critical activities to its mission.

Following the directional strategies is the analysis of adaptive, market entry, and competitive strategies. This will tell Naval Hospital Bremerton if they want their emergency preparedness program to grow or stay the same. It will allow them to decide how to cooperate or develop in the emergency preparedness market, and it will help them decide how they want their position or posture in regards to the emergency management program. For example, does Naval Hospital Bremerton want to be a reactor to new ideas and processes or do they want to be an analyzer?

When looking at the adaptive strategies, Swayne, Duncan, & Ginter (2006) suggest the use of the Product Lifecycle Analysis as a method to evaluate them. The Product Life Cycle is comprised of four cycles. Different adaptive strategies are used depending on where in the life cycle the product or service is that the organization is providing. The four cycles are introduction, growth, maturity, and decline. Emergency management may be considered to be in a growth stage. Swayne, Duncan, & Ginter (2006) also suggest the use of a Program Evaluation Analysis through a Needs/Capacity method for not-for-profit organizations. It is ideal for not-for-profit organizations because unlike many of the other tools that are used to evaluate revenues and strategies to increase revenues this tool focuses on the needs of the community and the organization's capacity to perform them.

The information gathered for this paper will be drawn from the experts in the field of emergency management within the hospital and those who work outside the hospital but share responsibility or fall in some hierarchal or collaborative chain during a disaster or emergency. Information will also be gathered by interviews, review of literature, and meetings.

Since governmental agencies rely heavily on policy and guidance, many naval instructions and directives will be reviewed and compared to what Naval Hospital Bremerton is

currently doing. Checklists and go-bys will be reviewed. Some checklists to be reviewed will come from the *Chemical and Bioterrorism Preparedness Checklist* (American Hospital Association, 2001), *NFPA 1600 (National Fire Protection Association, 2004)*, *Hospital Emergency Incident Command System* (San Mateo County Department of Health Services Emergency Medical Services Agency, 1998), *2006 Hospital Accreditation Standards* (Joint Commission on the Accreditation of Healthcare Organizations, 2006), *Bioterrorism and other public health emergencies: Tools and models for planning and preparedness* (Cosgrove, et al., 2004), local vulnerability assessments, and past JCAHO inspections.

The gathered information will be used for a strategic management analysis and review which includes the internal analysis and review of directional strategies, as discussed earlier, and proposals or recommendations. The majority of the data will be qualitative in nature and be bound by the knowledge, expertise and experience of those running the emergency management of Naval Hospital Bremerton. Different areas of preparedness will be investigated. Some of these can be referenced from the constructs annotated in Figure 1 or those as listed below.

1. Communications - internal, external
2. Resources - money, equipment, space and structure

3. Personnel - training, experience, adequate amounts
4. Planning - practice/rehearsal, contingency operations, collaboration with outsiders, informing the public.

As a reminder, this will be an administrative perspective of preparedness. This means that the actions of first responders, for example, will not be dissected but that content analysis of programs and issues surrounding the emergency management program will be closer to the focus.

The reliability of information should not be an issue. The means of gathering the data and recording it will ensure reliability. Reliability of information could be decreased, however, if information for this analysis is taken from historical documents and the methods of gathering or recording those data were flawed. This is not expected to be the case at this time. Additionally, there should be no statistical analysis done.

Validity will be dependent on the accuracy of information retrieved and the openness and honesty of those experts and interviewees. Those who may share responsibility in the programs or be affected by the findings of the analysis may not be fully open to discussion of poor preparedness issues. It will help to share with the interviewees that the researcher has no stake in the positive or negative outcomes of this analysis. The results and conclusions are aimed to ultimately make Naval Hospital

Bremerton more prepared to deal with emergency preparedness and management.

In addition to gathering information through interviews and meetings, policy and guidance will be reviewed and represents a prime example of the administrative aspect this research is geared toward. Compliance with directives from higher authority will be looked at and special attention should be given to noting that Naval Hospital Bremerton has identified the need for preparedness and is actively addressing all areas of the directives and instructions. The instructions and policies will include those from organizations that Naval Hospital Bremerton report to and have responsibility to, such as The Bureau of Medicine and Surgery or Navy Medicine West.

Situational Analysis

External Environment

Swayne, Duncan, & Ginter (2006) explain that the first part of the situational analysis should be the environmental analysis as its conclusions will "affect the directional strategies and internal analysis" (p. 56). An environmental analysis is needed in this setting because influences in the external environment of emergency management and preparedness influences capital allocation and decision making. It is also needed because the external forces are becoming more intertwined and they can possibly be looked at on a more individual basis. Additionally,

there is continual change in the environment through new threats and program revisions. When external forces are affecting an organization's decision making and affecting the way it allocates its resources, it must be analyzed. The final goal of an environmental analysis should be the proper positioning of the organization within the environment (Swayne, Duncan, & Ginter, 2006).

The environmental analysis for this research was done through the suggestions of Swayne, Duncan, & Ginter (2006) and consists of scanning and monitoring of the environment and then the forecasting and assessing of environmental change. This was done through different methods. First an external stakeholder analysis was completed to help direct where the research needed to look. Next, the opinions of those working within the emergency management and preparedness fields (expert opinions) were requested through interviews, brainstorming sessions, and attendance of focus group meetings. All of this information was used to help complete a Competitor Analysis.

Stakeholder Analysis

The external stakeholder analysis was comprised of those stakeholders identified in Figure 5.

External Stakeholder Analysis

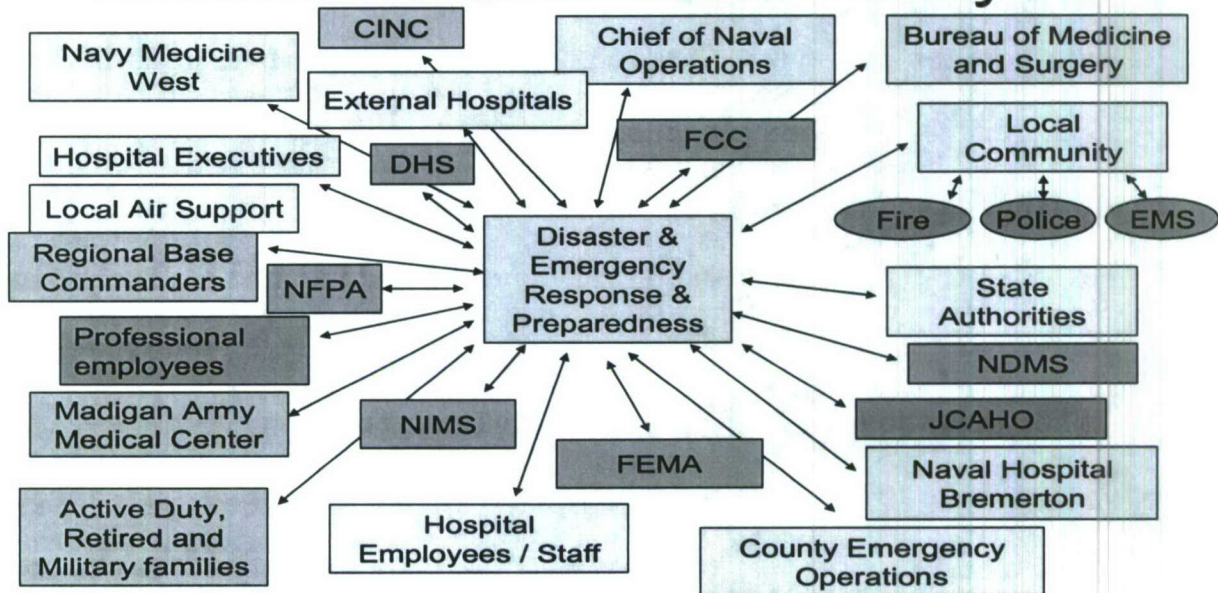


Figure 5. External Environmental Analysis.

Each of these stakeholders has some influence within disaster and emergency preparedness and was considered while doing the environmental analysis.

Kitsap County is the county in which Naval Hospital Bremerton resides. It encompasses an area of 395.97 square miles and in 2004 had a total population of 239,138. This equates to 585.82 people per square mile in Kitsap County. Of the total population 22% were under the age of 16 years old and 10.6% were over the age of 65 years old. The average age was 36 years old. The per capita income was \$31,740, which was 103% of the national per capita income of \$30,906. (Epodunk, 2004). The main

organization responsible for emergency and disaster response within Kitsap County is the Kitsap County Department of Emergency Management.

Competitor Analysis

Next, the environmental analysis continued through many hours of brainstorming with the Emergency Management Officer of Naval Hospital Bremerton, Commander Morash, and Lieutenant Commander Heilman, Naval Hospital Bremerton's Emergency Management Co-Chair. Interviews with numerous outside experts and external organizations that may influence the decision making of Naval Hospital Bremerton in the area of emergency management, preparedness, and response were also done. Finally, the Naval Hospital Bremerton Emergency Management Council meetings were attended.

As a reminder, the competitor analysis is being done to see what others in the field of emergency management are doing and not to get a competitive edge over them. Used in this research, it is an evaluation of different emergency management programs, plans, and protocols to capitalize on attributes of them or lessons learned and to possibly see what those organizations saw as Naval Hospital Bremerton's role in community disaster response.

The competitive analysis was done through interviews with Phyllis Mann, Director Kitsap County Department of Emergency

Management; William Llewellyn, Training and Management Specialist, Madigan Emergency Operations Administration; Mike Mulvaney, Emergency Management Coordinator, Naval Medical Center San Diego; and First Lieutenant Merritt Brockman, Emergency Management Officer, Medical Readiness Office McChord Air Force Base. Civilian hospitals may be targeted for information in future research but have not been explored within this research.

Kitsap County Department of Emergency Management is constantly preparing and training for any needed response to an emergency. An interview with Phyllis Mann, Director, Kitsap County Department of Emergency Management on August 29, 2006 revealed this. Kitsap County's emergency management program was built from the framework and guidance of *NFPA 1600, The Standard on Disaster/Emergency Management and Business Continuity Programs*. This reference was introduced in 1995 and its current version is dated 2004 (National Fire Protection Association, 2004). Director Mann states that this should be the baseline reference that all organizations turn to when starting, refining or reviewing their emergency management program. The purpose of *NFPA 1600* is to give organizations that deal with emergency management and disaster preparedness the tools needed to assess their current programs or develop new ones (National Fire Protection Association, 2004). Kitsap County EOC does annual reviews of their emergency management program using this

reference. To assess their preparedness further they do internal exercises and external exercises with local hospitals, police and fire departments, the Navy Regional Emergency Operations Center, Madigan Army Medical Center, Fort Lewis, McChord Air Force Base, Tribal organizations, County and Regional Department of Health and Human Services, Kitsap County Health District, and others. Their upcoming projects include developing and implementing a COOP for the Kitsap County Department of Emergency Management. Director Mann states this has been a hard and time intensive program to set up.

Madigan Army Medical Center serves not only as the Regional Medical Command but also as the Emergency Operations Center for their area. They report to Fort Lewis Army Base as their Regional Emergency Operations Center for issues such as a pandemic outbreak and when NDMS is activated but are their own Regional Operations Center for all other issues such as a mass fatality. When acting as their own Emergency Operations Center they will liaison with Fort Lewis for command and support of local emergency medical services, fire, and police. Fort Erwin, Beck Army Hospital, Presidio of Monterey U.S. Army Health Clinic, Yakima Training Center, U.S. Army Umatilla Depot Activity, and McChord Air Force Base report to Madigan Army Medical Center as their Emergency Operations Center. Madigan Reports directly to Army Medical Command for guidance and

direction with their emergency management program (W. Llewellyn, Training and Management Specialist, Madigan Emergency Operations Administration, personal communication, September 25, 2006).

First Lieutenant Merritt Brockman, Emergency Management Officer, Medical Readiness Office McChord Air Force Base relates how McChord's emergency management program is set up (M. Brockman, Emergency Management Officer, Medical Readiness Office McChord Air Force Base, personal communication, August 20, 2006).

The Medical Readiness Office is located at the Medical Clinic and is staffed by two full time employees; a civilian contracted employee and a military member. This is not, however, the only function of these employees. They also serve as Unit Deployment Managers.

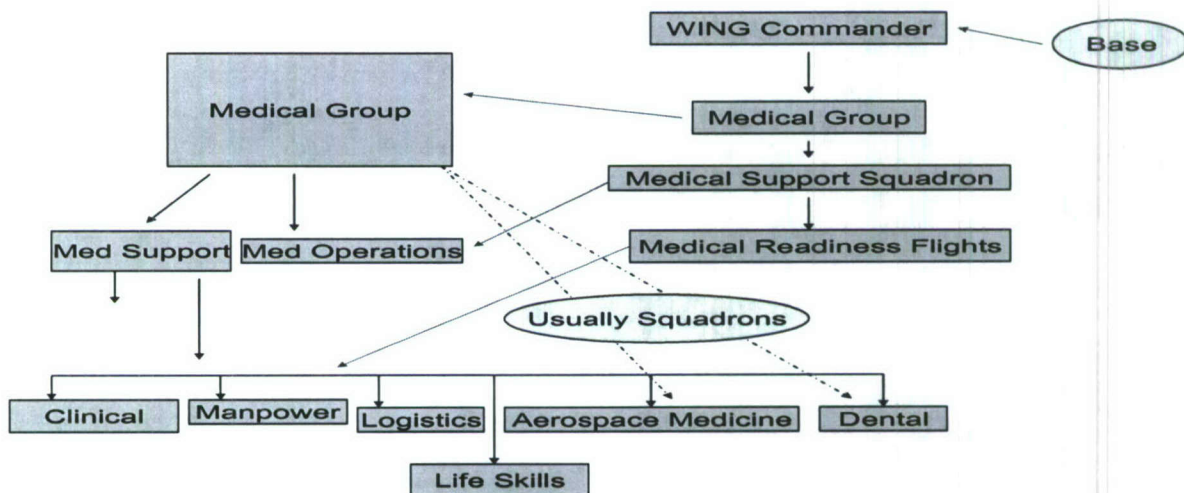


Figure 6. Medical Readiness Office, McChord Air Force Base:
Routine Command & Support diagram for McChord Air Force Base.

Approximately ninety-nine percent of the time an Air Force Base will be its own Wing Commander and be broken down into four groups. These groups are Operations, Maintenance, Mission & Support, and Medical Group. The Medical group is further broken down into Medical Squadrons. Figure 6 displays the breakdown. Usually there are the four squadrons named Medical Support, Medical Operations, Dental, and Aerospace Medicine. Next, each Squadron is comprised of Flights. The small size of McChord's Medical Group, also known as the 62nd Medical Group, has caused the Dental and Aerospace Medicine Squadrons to be designated as Flights. Designated Flights vary and are divided by mission requirements. Examples of Flights of the 62nd Medical Group include Logistics, Clinical, Manpower and Life Skills. Each of these Flights is further broken down into departments and each Flight has its own emergency management representative. Each Flight also has its own response and emergency plan and can be found in the Medical Contingency Response Plan that is maintained by the Medical Readiness Office.

During an emergency the command and support for the 62nd Medical Group looks like that represented in Figure 7.

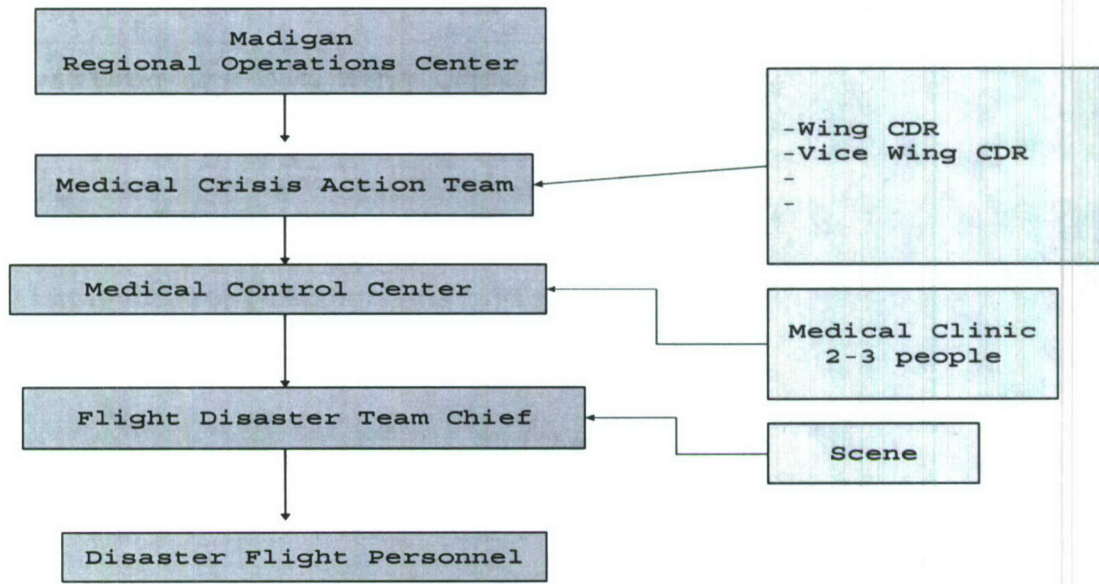


Figure 7. Medical Readiness Office, McChord Air Force Base: Emergency Management Command & Support diagram during emergency response for McChord Air Force Base.

Disaster Flight personnel are at the scene and working the emergency plan for their Flights. They report to their respective Team Chief for who then reports to the Medical Control Center. The Medical Control Center (MCC) acts as the preliminary Emergency Operations Center for McChord AFB through the 62nd Medical Group's staffing of 2-3 people, on 12 hours shifts, at the Medical Group. The MCC then reports to the Medical Crisis Action Team that is staffed by numerous personnel, including the Wing Commander and Vice Wing Commander. Finally, the Medical Crisis team works with Madigan Army Medical

Center as their Region Operations Center (M. Brockman, personal communications on September 20, 2006).

The effectiveness of the 62nd Medical Group's emergency management program is assessed through drills, after action analysis and reports, Air Force inspections, and Health Services inspections, including JCAHO. Some of the JCAHO requirements for emergency management plans can be seen on page 74 and 75.

Mike Mulvaney, Emergency Management Coordinator, Naval Medical Center San Diego, states that Naval Medical Center San Diego (NMCSD) is currently working on revising their current emergency management plan and instructions (Personal communication September 27, 2006). A glance of the hierarchy of Command and Support can be noted in Figure 8.

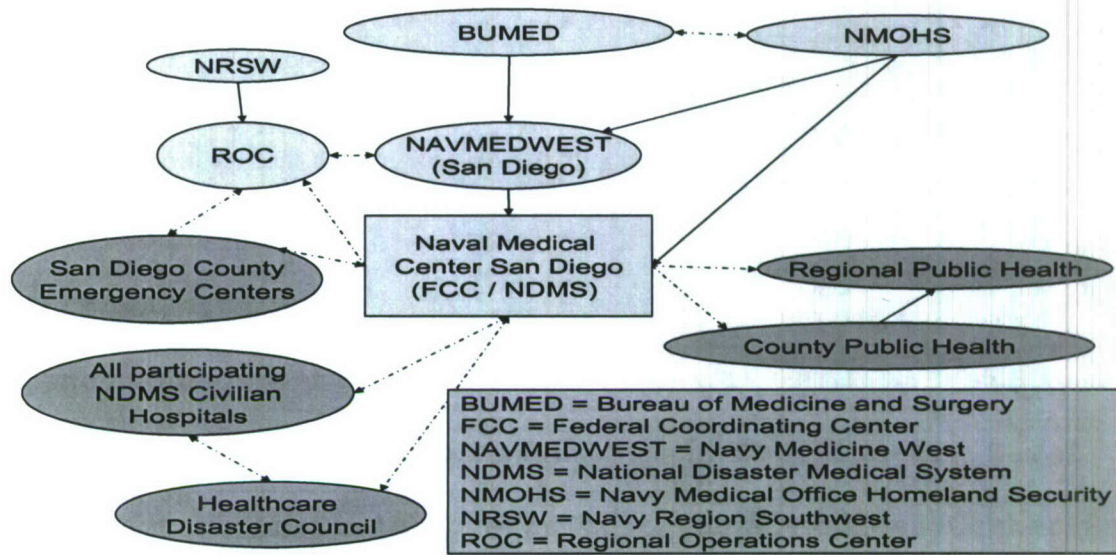


Figure 8. Emergency Management Coordinator, NMCS: Naval Medical Center San Diego emergency management organizational relationships.

NMCS has an emergency management plan but is constantly working to improve it. During a disaster response it stands up an Emergency Operations Center within the hospital and implements the HEICS. It reports to Navy Medicine West, their Immediate Supervisor in Charge (ISIC), and the Regional Operations Center (ROC) located at Naval Station San Diego. The ROC is a central operation center that combines all regional representatives needed to respond to a disaster or emergency. The ROC in San Diego is responsible for coordination efforts of California, Arizona, and Nevada. NMCS has an assigned

representative to work at the ROC to be their point-of-contact providing updates and act as a liaison for resources and capabilities. NMCSD reports to the Regional Operations Center through its Emergency Operations Center.

NAVMEDWEST does not currently have a specific position for a full time disaster response coordinator. They are currently working on creating that job. This person could be the liaison between BUMED and NMCSD (interpreting BUMED directives and passing them onto NMCSD) and could also act as the technical expert and emergency management program monitor. When this is complete they may also send a representative to the ROC as needed.

As the Federal Coordinating Center, NMCSD is responsible for all NDMS participating hospitals in San Diego County and coordinate the efforts and resources of these hospitals through NDMS when directed. To make this easier, and be a partner of the San Diego County Emergency Medical System, they regularly attend the monthly meetings of the San Diego Healthcare Disaster Council.

NMCSD's emergency management program has an Emergency Management Executive Committee that meets monthly to assess its program and discuss issues and strategies of the emergency management program. The Command Emergency Manager is the head of the committee and is a physician. The major assessment tools for

NMCSO are continual review of NMCSO's policy and directives, ensuring they are current and up to date, the JCAHO standards for the emergency management program, and two major drills per year, one of which includes the community.

Mike Mulvaney relates three things he feels are important about the emergency management program. First he states that everyone continually talks about a plan but the plan is part of the emergency management program and the focus needs to be on a program. The plan will help execute the program. The plan should include areas such as education, training, equipment, and resources. Second he states that he feels the program may benefit from a permanent active duty representative when dealing with other military organizations. Third, he feels that one of the best attributes of their emergency management plan is that it breaks down each individual department's emergency response actions in an easy to access format for the departments. It is hard to get any representative to read the entire emergency management plan and this helps tremendously.

Internal Analysis

Naval Hospital Bremerton is a fully JCAHO accredited, federally owned, not-for-profit military hospital and only provides healthcare to select beneficiaries, thus acting as a closed panel healthcare facility. The current beneficiary count for fiscal year 2006 was 54,793. These individuals were enrolled

to Naval Hospital Bremerton through TRICARE Prime health insurance and this number of patients was considered 94% of the total capacity of patients that could be seen. This population included 11,657 active duty military, 17,563 active duty family members, 9,675 retired personnel, 13,959 retired family members, and 1,939 other beneficiaries that fall within its catchment area. The catchment area is a 40 mile radius and can be seen in Appendix F. The 20 mile radius is considered the enrollment area. The enrollment area is considered to be an area that, excluding further barriers such as the waters of Puget Sound, should be close enough to allow less than a 30 minute drive to the healthcare facility. This is considered adequate access to care for Naval Hospital Bremerton. Some military healthcare facilities use the enrollment area as the area designated for mandatory enrollment. If beneficiaries live within that area they would have to utilize the military healthcare facility as their primary care provider. Naval Hospital Bremerton does not, however, have a mandatory enrollment policy within its catchment or enrollment area as other military facilities do. This allows eligible beneficiaries to be seen in town by civilian healthcare facilities if they choose by selecting a TRICARE participating Provider. Naval Hospital Bremerton does consider the areas between the 20 and 40 mile radiuses to be a referral area. This means that if civilian healthcare facilities must refer one of

their TRICARE patients for specialty care or further evaluation, the approval must be done through TRICARE and if possible the needed services may be provided by Naval Hospital Bremerton. The total number of beneficiaries, including Naval Hospital Bremerton's subordinate command, Naval Branch Clinic Everett, totaled 83,998. The total beneficiaries included 16,815 active duty military, 24,598 active duty family members, 16,418 retired personnel, 22,099 retired family members, and 4,068 other beneficiaries. These beneficiaries were previously separated for the comparison with the Kitsap County population numbers. Naval Branch Clinic Everett is located in Snohomish County, Washington.

The past strategies for Naval Hospital Bremerton's Emergency Management Plan have been to follow guidance of higher authority and ensure it meets the requirements set forth by them and other accrediting agencies, i.e. JCAHO. It has done this through expansion strategies of the Emergency Management Plan, as dictated by new requirements, but their main focus has been the adaptive strategy of maintaining. It has practiced the strategy of status quo in the areas it is sufficient in and enhancement in the areas of quality, efficiency, and innovation. They have been able to do this even though the total number of military forces, and subsequently the number of Naval Hospital Bremerton staff, has decreased through force reduction,

deployments, and augmentation requirements. Ultimately, there have been less people to accomplish the same amount of work.

Naval Hospital Bremerton has also practiced a market entry strategy of purchasing needed equipment and supplies, for example the decontamination trailer and equipment, but has also cooperated with external agencies through "alliances of understanding" in emergency management through collaboration and support. Competitive strategies have included a posture of reactor and a position of focus. The Naval Hospital is totally reactive to the requirements of its emergency management plan and has worked reactively to other external pressures and requirements rather than acting proactively. Their primary position has also revolved around cost. Most everything the hospital does with emergency management will revolve around the abilities to fund it. They are not concerned with competing in the emergency preparedness arena. They just want to be efficient and effective in taking care of their beneficiaries and the community.

Specific requirements for Naval Hospital Bremerton's Emergency Management Program are found in Commander, Navy Medical Command (1989). The general framework of these requirements is as follows:

1. The healthcare organization must assign a disaster preparedness officer and staff.

2. The inpatient facilities must have a detailed plan for handling mass casualties.
3. Each inpatient facility must participate in a mass casualty exercise, at least twice annually, one must be a command wide drill and the movement of casualties from outside the hospital to inside the facility must be part of the exercise.
4. The facility will designate a Disaster Control Team, identify medical material and equipment to support them, and ensure they are compliant with the Blood Program.
5. Those facilities supporting radiological programs will develop specific plans for emergency response to them.

Naval Hospital Bremerton meets the above requirements. The aforementioned instruction also provides proposed annexes for inclusion into the local disaster preparedness plan and provides a checklist to ensure that the plan is complete and adequate. Appendix G is a copy of the checklist.

Naval Hospital Bremerton's Disaster Preparedness Plan is the operational supplement to the Emergency Management Plan through its enclosures, including the Disaster Incident Response Plan, and includes the following additional actions (Commander, Naval Hospital Bremerton, 2004).

Bremerton Preparedness

1. Disaster preparedness committee will meet twice monthly, provide detailed debriefs after each drill, and ensure program changes are communicated to hospital staff.
2. Disaster response plan activated semi-annually.
3. Personnel recall activated once per quarter.
4. Each drill will have criteria based evaluation as listed.
5. Directors, Department Heads and Division Officers shall be familiar with Disaster Preparedness requirement.
6. Subordinate military healthcare facilities will ensure local preparedness plans are in line with Naval Hospital Bremerton's instruction.
7. All Naval Hospital Bremerton staff will be familiar with the Basic Preparedness Plan within this instruction.
8. This plan will be reviewed annually by the Disaster Preparedness Committee (p. 1-3).

Naval Hospital Bremerton's Emergency Management Plan was created from JCAHO requirements.

Naval Hospital Bremerton's Command & Support and Reporting authorities are represented in Figure 9.

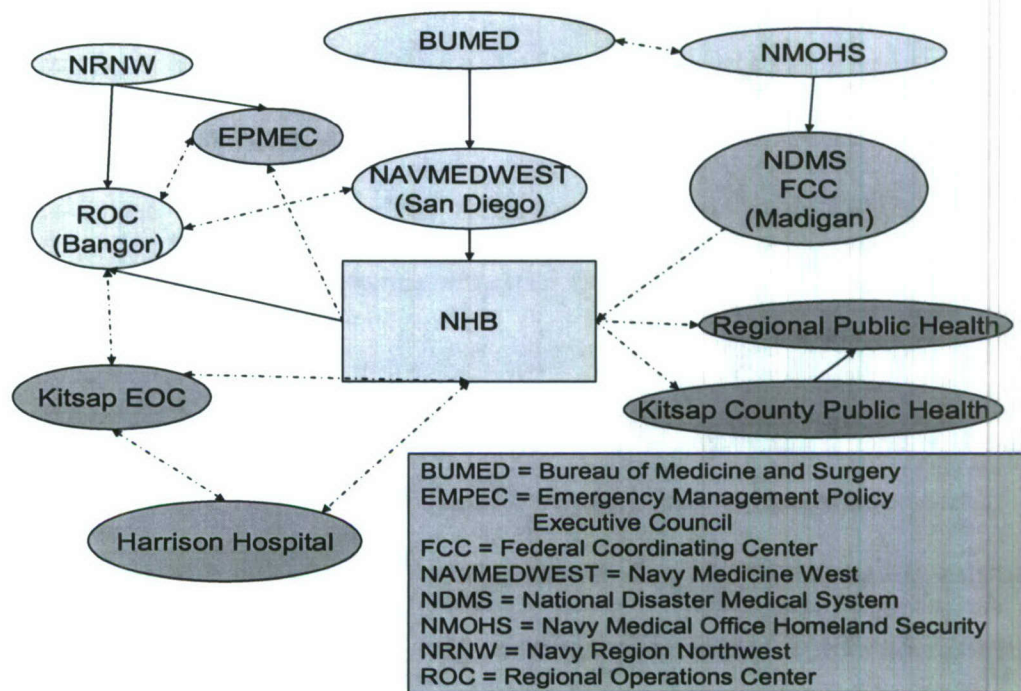


Figure 9. Naval Hospital Bremerton's Command & Support and reporting authorities during emergency response.

Stakeholder Analysis

Figure 4 and Figure 5 were used to identify stakeholders for Naval Hospital Bremerton. These stakeholders were used for consideration of agencies, groups, or organizations that may have some influence in the decision making of Naval Hospital Bremerton's emergency management.

SWOT Analysis

A SWOT Analysis was completed for Naval Hospital Bremerton's Emergency Preparedness Program. The information for the SWOT analysis was primarily gained through interviews and

through reviewing the program. This analysis revealed many strengths, weaknesses, opportunities and threats.

Naval Hospital Bremerton strengths fall into the categories of: communications, working relationships, emergency program awareness, security, and vulnerability analysis. The weaknesses relate to: the Emergency Management Officer, budgeting, local policy and guidance, command and control, continuity of operations, chemical response capabilities, and training. The opportunities include Emergency Management Officer, collaboration with external agencies, budget, and Naval Hospital Bremerton's new executive Leadership. Finally, the threats included continuing the EMO as a collateral duty, family preparedness, lost working relationships with civilian agencies and contacts, ongoing new and updated requirements, lost interest, and loss of current EMO.

Naval Hospital Bremerton's emergency management program does have some great strengths. Poor communications can negate all preparedness and efforts made during an emergency response. The communications capabilities of Naval Hospital Bremerton are considered one of its strongest attributes to the emergency management program. For emergency preparedness they currently use the Emergency Land Mobile Radio System (ELMRS), satellite phones, HAM radios, telephones, and internet.

ELMRS is a mobile land based UHF radio system that allows

communications between all local Navy assets (including all Navy Base Kitsap subordinate commands), and local Emergency Medical Services and Fire departments. ELMRS is a great advantage in emergency response and is it is possible that the full integration and use by civilian medical facilities could be less than five years away. Fort Lewis Army Base is also just currently getting this capability and equipment installed. It is projected that this will soon be the standard for, and integrated throughout, the Department of Defense (R.C. Morash, Naval Hospital Bremerton's Emergency Management Officer, personal communication, September 7, 2006).

Naval Hospital Bremerton has the satellite phone capability as well. This capability allows communications with anyone, including all civilian and public health agencies but is limited to Line-of-sight and single agency communications. This means that the person using the satellite phone must have an unobstructed path between the phone antenna system and the satellite and that only one other organization or agency can be talked with at a time. This could be an issue in certain circumstances and may even dampen collaboration efforts. Currently the hospital does monthly phone communication tests with civilian counterparts.

Next is the use of HAM radio. The American Radio Relay League (2006) describes HAM communication as done through radio

waves, just above the AM band through extremely high microwave frequencies, which are controlled by the Federal Communications Commission (FCC). The FCC allows the use of these radio bands but require that users are licensed. This type of communication can be via handheld or base station radios. It can be used to send more code, voice communication or can be used in conjunction with computers to send digital communications. The Federal Communications Commission allows the use of these radio waves for fun by HAM radio operators but it was originally developed, and is still used for, emergency communications. The Federal Communications Commission has created a pool of emergency radio operators in time of need. Naval Hospital Bremerton has capitalized on the opportunities to use this pool of experts by being HAM radio ready but will not be fully capable until a laptop computer has been allocated towards HAM communication. After they are fully HAM capable and all equipment is installed the biggest obstacle with will be to keep hospital staff qualified and licensed to use it.

Another asset for Naval Hospital Bremerton is the internet. Communication can be sent via email or through web based internet sites through chat. Mass communication can be done by posting information for great numbers of people or organizations to read if needed as well. There is also access to regional information that is passed via a website for disaster management

and response known as the Hospital Capacity Web Site (Alexander, n.d.). Through this website Naval Hospital Bremerton is considered part of the Trauma Region Northwest. This website allows participating hospitals, and other medical facilities, to see what current assets and capabilities that other organizations may have. It is intermittently updated and relays information such as number of hospital beds currently available for use in an emergency, poison antidote and other medical supplies available, pharmacy supply status, readiness capabilities, Chemical, Biological and Radiological capabilities, emergency department status, NMDS status and other information.

The next major strength Naval Hospital Bremerton has toward its emergency management program is the great working relationship with external emergency management agencies. These agencies include the Regional and County Public Health, Kitsap County Department of Emergency Management and Emergency Operations Center, Navy Region Northwest Emergency Operations Center, Harrison Hospital, and local EMS. These relationships have created a camaraderie needed for organizations to be able to work well together. It has also created a willingness to share resources, participate with each other in regional exercises, and help evaluate each other's operations.

The experience the current Emergency Management Officer and the dedication he has brought to bettering the program is also a great strength. His emergency management experiences include:

- Chem-Bio Casualty Care Instructor trained at USAMRIID (U.S. Army Medical Research Institute for Infectious Diseases) and USAMRICD (US Army Research Institute of Chemical Defense).
- Medical Operations Officer with the Marine Corps' Chemical-Biological Incident Response Force (CBIRF) for 3 ½ years:
 - o Coordinated and conducted chem-bio casualty care training for various Emergency Response Agencies on the U.S. East Coast.
 - o Conducted chem-bio casualty response training in Jordan and Kuwait for senior Jordanian and Kuwaiti government officials.
 - o Directly assisted the Jordanian government in the writing of their chem-bio consequence management plan.
 - o Worked directly with senior Israeli medical department officers on mutual support initiatives for chem-bio consequence management.

Through his efforts, Naval Hospital Bremerton has met the major requirements for Emergency Management Program in the past.

Naval Hospital Bremerton is also envied by local healthcare facilities for its security capabilities and perimeter fence. A

benefit of being a military installation, the security and potential safety measures of the hospital is a great strength.

Lastly, Naval Hospital Bremerton has a very in-depth Hazard Vulnerability Analysis that is considered one their great strengths and they are also the designated Public Health Emergency Officer and medical advisor to Navy Region Northwest. Navy Region Northwest encompasses Washington, Idaho, Oregon, and Alaska.

There are many weaknesses of the emergency management program. Many seem to be related to the first major weakness--the lack of a full-time Emergency Management Officer that can be totally dedicated to the program and have the time and ability to review and execute the requirements needed for its success. The current Emergency Management Officer sometimes works in excess of 50 hours per week in his duties as a healthcare provider and has other command responsibilities as well. After checking into the hospital he aggressively tried to get the program online but was soon deployed for eight months and the program stagnated. Since his return he has continually worked to get the program back to where it needs to be. There has been minimal time to keep on top of program requirements and give the program the full attention it needs. Additionally, the current emergency Management Officer will be retiring in June 2007. This is an enormous program and no relief has been identified for

replacement. This needs to happen before all the corporate knowledge and experiences of the local issues leave the Navy.

Although once adequate, the current Emergency Management Plan needs to be revised. There have been some changes and new requirements for the program including the Command & Support and Reporting Authority. The last revision of the plan is dated January 20, 2004 and the Emergency Management Officer is currently working on the proposed revision (R. Morash, Emergency Management Officer, personal communication, October 2, 2006). Even though the instruction states that Naval Hospital Bremerton will use the structure of HEICS, it could be incorporated within the program plan as well, versus separate binders maintained by the Directors. Performance indicators and measures of performance could also be added. These performance indicators and measures of performance could include the accomplishment of drills and exercises, compliance with various program requirements at a specified percentage rate that is derived from checklists or even the evaluated knowledge of staff to what their roles and responsibilities are according to the HEICS documentation.

Another weakness in the program is confusion that could exist due to the operational chain for Naval Hospital Bremerton being different than the administrative chain. Naval Hospital Bremerton reports to The Bureau of Medicine and Surgery through

Navy Medicine West for all operational issues and reports to Navy Region Northwest for all medical advisory and administrative issues for its region. Couple this with the fact that none of the local regional areas of responsibility are the same, it increases the confusion. Naval Hospital Bremerton falls into many different regions that all overlap but are not the same. Navy Region Northwest and the Federal Coordinating Center Region (Washington, Idaho, Oregon, and Alaska) is different than Trauma Region Northwest (Clallam, Mason, Kitsap, and Jefferson Counties) which is different than Public Health Region 2 (Kitsap, Jefferson, and Clallam Counties).

Naval Hospital Bremerton has no Continuity of Operations Program (COOP) as mandated by The Secretary of the Navy, The Bureau of Medicine and Surgery, and JCAHO. If Naval Hospital Bremerton or its immediate surrounding area were to become unusable due to contamination or destruction there is no plan to be able to relocate and continue its Mission Essential Functions. A plan is currently being worked on and buildings are being identified. Kitsap County Department of Emergency Management (KCDEM) states that this has been a hard program for them to get online as well and they do not currently have a completed COOP plan (P. Mann, Director, KCDEM, personal communications, August 29, 2006).

As stated earlier the chemical response capability of Naval Hospital Bremerton is diminished. They started with no capabilities but have progressed to identifying a decontamination team and have just received a used decontamination trailer that needs some work (Lieutenant G. Burke, personal communication, October 30, 2006). They are also expecting the corresponding decontamination equipment soon. It is expected that they will have all the decontamination capability elements soon and then training will commence for the decontamination teams.

The Pandemic Flu Plan is not as far along as the Pandemic Flu Committee would like it to be either. The upcoming proposed Pandemic Exercise may even have to be postponed (R. Morash, personal communication, October 4, 2006). Commander Victoria Crescenzi, Pandemic Flu Planning Group Co-Chair Naval Hospital Bremerton, explains why she feels the plan may be lacking later during an interview.

Other weaknesses are that the hospital is not adequately NIMS trained, there is no specific hospital emergency management budget and there is no long range training plan for emergency management. The Emergency Management Program continues to work reactively to requirements instead of proactively.

There are many opportunities that exist for the emergency management program. First there is the opportunity to make the

Emergency Management Officer a fulltime job and to even create a civilian job description for it. This would be beneficial for allowing more time for program focus and staffing continuity. It would also help ensure continuity in the program with civilian counterparts and help retain corporate knowledge and institutional memory.

With the new BUMED emergency management plan guidance being released soon there is an opportunity to totally refine the hospital's current plan. There are also upcoming major State and County drills and exercises that Naval Hospital Bremerton can participate in which would enhance already existing partnerships. The Management Information Department is also looking at how they can network stay at home workers if the need arises. This will allow business to continue if they are prevented from coming into the hospital. There is also an opportunity to create a hospital budget strictly for emergency management.

Lastly, and possibly most importantly, the new executive staff onboard can embrace the emergency management program and give it the executive backing and support that it needs to become part of the organizational culture.

The most immediate threat to Naval Hospital Bremerton's Emergency Management Program and preparedness is the upcoming loss of the current Emergency Management Officer--with no relief

identified. Loss of the institutional memory could stall progress and loss of current working relationships may create the need to reestablish contacts and the trust between them. Related to this, but a separate threat, is the continual rotations and deployments of military members—creating the same problems as noted above. The Emergency Management Officer is not an easily filled position. Naval Hospital Bremerton's Emergency Management Program went through three different Officers during the last deployment of the appointed Emergency Management Officer. Furthermore, emergency management response and preparedness issues, and protocol, are continually under the threat of change and program revisions. New and different threats may arise as well as new methods of dealing with them. The latest requirements for a Pandemic Flu Plan are an example of this. Lack of continuity will also create a burden on the emergency management program.

Another threat to Naval Hospital Bremerton's Emergency Management Program is family preparedness. Employees will not be as effective or efficient at work during a disaster if their families are not taken care of. Family preparedness is of utmost importance to the hospital's ability to complete its mission requirements and for people to feel comfortable to come to work—leaving their families alone. Training and preparing families and the use of ombudsman during emergency management may help

alleviate this possible weakness. An example of this training is the website and on-site training seminars of household and family preparedness offered by Kitsap County Department of Emergency Management. The expected outcomes are that families will have the supplies, food, and basic knowledge needed to cope and survive in the immediate hours after a disaster until help or other supplies are attainable. The ombudsman will be a liaison between Naval Hospital Bremerton and family members if military personnel cannot be immediately reached. This will give some immediate support to families. Family preparedness will allow the military and hospital staff to concentrate on their work and not worry about what is going on at home.

Finally, the importance of the emergency management program can be lost. Without the immediate signs of return on investment, the correct priorities of the healthcare facility, or if there is no perceived threat of disaster the emergency management program may be placed on the "back burner" of the strategic planning and business plans for the hospital.

Checklists and Inspections

The American Hospital Association (2001) has provided a checklist for looking at chemical and bioterrorism preparedness. Although this research was not only about preparedness for chemical or bioterrorism, many of the same issues overlap. The main categories of this checklist were general information,

communications and public affairs, access to care, business (healthcare) continuity plan, capacity, pharmaceuticals and equipment, training and personnel, facility management/security, psychiatric services and crisis management, and diagnostic capabilities. Most of the main areas of this checklist were looked at from the general perspective and revealed some interesting facts.

The general information and capacity categories from American Hospital Association (2001) revealed that the emergency management program is currently compliant with JCAHO's required number of annual exercises and drills for their Environment of Care section but that other requirements need improvement (Joint Commission on the Accreditation of Healthcare Organizations, 2006). The latest JCAHO Environment of Care Standards, Section 4.10, review done on June 29, 2006 shows that the hospital is currently not compliant (Schafer, 2006). The major discrepancies noted were:

1. EC.4.10.2: No formal documentation is available that Naval Hospital Bremerton's Hazard Vulnerability Analysis was discussed and prioritized with the other community agencies.
2. EC.4.10.5: [The Emergency Management] Plan does not adequately address recovery strategies.

3. EC.4.10.6: [The Emergency Management] Plan does not provide a "process" by which the various phases of response and recovery would be initiated.
4. EC.4.10.10: [The Emergency Management] Plan lacks specific processes for scheduling, modifying, or discontinuing services; controlling information about patients; transporting patients, in emergency conditions. ... Lacks Annex for special staff support. ... Lacks plans for extended water supply.
5. EC.4.10.13: [The emergency Management] Plan does not include processes for establishing an alternate site.
6. EC.4.10.15: Although training occurs with military emergency response agencies and with local civilian hospitals and agencies, and the plan states support of other federal civilian agencies will be provided as resources permit, the emergency response plan does not address specific process by which support for other agencies would be carried out.
7. EC.4.10.20: Although the Facilities Department has contingency plans for alternate power, the procedures are not identified in the Disaster Plan.
8. EC.4.10.21: The plan addresses Chem-bio-rad and casualty management, however, full capability of

chemical casualty response is hindered by insufficient equipment (which is on order). Management of contagious biological casualties is also suffering some limitations related to lack of Powered Air Purifying Respirator respiratory protection.

All of these JCAHO discrepancies have been addressed in a Plan of Action report dated July 2006 but it seems that none have been fixed yet. The last hospital and community integrated drill on bioterrorism was conducted in March 2005. In June 2006 a Pandemic Flu Exercise was conducted and was used as a bioterrorism exercise.

Naval Hospital Bremerton is not specifically designated in NDMS as a voluntary patient or casualty receiving hospital. As stated before, this is usually reserved for hospitals with a 100 bed capacity or greater capability. It is integrated with NDMS however because it is a federally owned hospital. Naval Hospital Bremerton's active bed capacity is 53. These beds are throughout the hospital and are noted in Figure 10.

MTF: NAVHOSPBREM		
BED REPORT	Active	Inactive
Emergency Dept.	10 (+1 isolation)	3
Medical/Surgical	16 (+2 Isolation)	18*
Trauma/Critical Care	4 (+2 isolation)	N/A
Operating Room	5/1Cytology Rm	2
Orthopedics	N/A	N/A
Isolation	10	2
Pediatrics	N/A	N/A
Burn Care	N/A	N/A
OB/GYN	10 (+1 isolation)	N/A
Total	53/1Cytology Rm.	25

* includes 7 Gurney/beds (3 APU/4 PACU)

Isolation Breakdown:

Active

2/5MS

2/Bldg 17 Rms C2111, C2117

4/ICU

1/4OB

1/ER

Inactive

2/Bldg 17 Rms C3313, C3309

Figure 10. Patient Administration Department, Naval Hospital
Bremerton: Naval Hospital Bremerton Bed Capacity

(Revised June 21, 2006)

When needed, the Naval Hospital could expand these beds by 25. They may receive patients at the request of the area Federal Coordinating Center if asked to do so, but there is not an automatic agreement of the number of beds offered. It is speculated, from the last Command Pandemic Flu Exercise, that during a pandemic outbreak the hospital may be able to house up to 1700 casualties in beds and cots placed throughout the hospital but that medical and support staff could only realistically provide care for up to 200 casualties (R. Morash,

personal communication, October 2, 2006). There is no plan, however, to expand to this capacity.

Although Naval Hospital Bremerton has an internal point of contact for bioterrorism and chemical incidents, their ability to respond, however, is limited. The decontamination tent is currently inoperable due to a broken hot water heater. A new trailer has been acquired but is not yet outfitted or stocked to receive and/or treat contaminated casualties; the equipment is forthcoming. When the capabilities of the new decontamination trailer are attained, and taking into consideration the emergency department's capabilities and resources, it is estimated that 20-30 chemically contaminated ambulatory casualties could be treated per hour and 4-6 non-ambulatory patients could be treated per hour during a disaster.

Training and personnel could be considered the backbone of preparedness and response. Naval Hospital Bremerton assesses its staff's emergency preparedness and capabilities knowledge through monthly surveys. The staff receives training on emergency and disaster preparedness upon reporting to the hospital and annually thereafter. They also receive training during the mandatory semi-annual exercises performed by the hospital. It is unclear if this is a sufficient amount of training and if more is warranted. The exercises alternate between natural and biological disasters. The limited

capabilities and supplies for chemical response drills, however, prevent adequate drill scenarios that would lead to positive learning outcomes. There seems to be an adequate amount of staff for this training, when including the resources of the Safety and Staff Education and Training Departments and assessments for drills are primarily done through after action evaluations and debriefs. The training of personnel on Personal Protective Equipment is estimated to encompass only 15 percent of staff at the hospital by the Emergency Management Officer. Further immediate investigation needs to be done to assess the training of health care providers and laboratory workers in regards to chemical and biological incidents. This assessment should later include other staff such as custodians, food service, receptionists, and ancillary non-provider personnel. The Executive Board has been trained at the community Emergency Operations Center recently, but further training in NIMS is still required.

Communications and Public Affairs was another category that was looked at. If there was a need for a chemical or biological incident public announcement, Naval Hospital Bremerton has no specific media or public affairs protocols but one is currently under draft with the Public Affairs Office. This would be forwarded to the Regional Command for dissemination if requested. Naval Hospital Bremerton would also rely upon the

civilian Public Health Region 2 for a skeleton draft for a public service response if needed. Communications capabilities were discussed earlier during the internal SWOT analysis.

Civilian Public Health Region 2 includes the military population in its planning and contingency operations and would be the outreach in the areas of access to care to help reduce barriers to meet the requirements of special health needs in the event of a threat or emergency due to a biological agent.

Naval Hospital Bremerton's transportation of casualties to collection points is also limited. The hospital currently has one ambulance and it is currently used only for transportation of patients from the facility helicopter pad to its emergency department. If transportation is needed, it would request resources from the Regional Operations Center. This would easily overwhelm the limited local ambulance support in the area. Naval Hospital Bremerton used to have an EMS Coordinator that worked with the local community resources but this job has been vacant since the last coordinator retired from active duty.

The lack of an alternate care site is another discrepancy noted. There is a plan in place for a secondary care site at the facility but not for an off-site area if the facility needed to be evacuated. This will be discussed later under the Continuity of Operations Program although framing plans are currently being developed. The facilities being looked at are located in the

local Jackson Park Community. The facilities include the meeting hall, church, teen center, daycare center, and training center. Communications and transportation will be major issues in the alternate care sites for Naval Hospital Bremerton. There is, however, a patient tracking and monitoring program that is used and maintained by the Patient Administration Department.

If the emergency department is contaminated there is the capability to shut down the Heating, Ventilation & Cooling (HVAC) system but there is further research needed to see if this shutdown can be compartmentalized or segmented. Additionally, further guidance is needed to stipulate when environmental factors dictate mandatory shutdown of this unit and how long specific hospital areas can go without full volume air exchanges and positive or negative pressures.

Naval Hospital Bremerton currently carries pharmaceuticals and equipment to address biological and chemical casualties for up to one-third of their total beneficiary count for up to four days. Any further resources would be requested from the regional command or through pharmaceutical vendors. The main pharmaceutical prime vendor for Naval Hospital Bremerton is Cardinal Health. It is unsure if the pharmacy has written medication distribution scenarios from the pharmacy supply personnel. Additionally, there is a limited supply of medications and antidotes for nerve agent exposure. The pharmacy

has identified a National Pharmaceutical Stockpile Representative, Mr. Larry Logan, Pharmacy Department. There are no written memorandums-of-understanding between healthcare facilities to share these resources but it is understood that cooperation will be needed and amends will try to be made after the fact.

The last information gathered from the American Hospital Association (2001) checklist in chemical and bioterrorism preparedness is that Naval Hospital Bremerton's laboratory capabilities to detect chemical and biological agents is practically non-existent. Although 90 percent of all routine laboratory specimens are analyzed in-house, there are no capabilities for a chemical or biological emergency.

Naval Hospital Bremerton's Pandemic Flu Plan needs further work. The latest plan is dated February 2, 2005 and a new revision is currently being done. Assistant Secretary of Defense (2006) gave more detailed guidance for preparation of pandemic influenza and Naval Hospital Bremerton (2005) needs to be tailored and revised to relay the latest guidance. Commander Crescenzi, Naval Hospital Bremerton's Pandemic Flu Planning Group Co-Chair, gives a brief history of the hospital's preparation for a pandemic influenza response plan. Navy Medicine West (NAVMEDWEST) has formed a pandemic flu committee that meets every other Thursday via teleconferencing to discuss

local plans to prepare for the response to pandemic influenza for all Navy commands under their authority. Naval Hospital Yokosuka's plan was chosen as the ideal and most complete plan to be used for all other NAVMEDWEST Medical Treatment Facilities to use and tailor for their medical facility. This was decided around May 2006. Naval Hospital Yokosuka's Pandemic Plan was dissected and divided up among the pandemic flu planning group members. Although most of the plan has been marked up and tailored to fit Naval Hospital Bremerton's specific requirements there has been minimal action on TAB C, Healthcare Services: Plans of Actions, within the instruction. These requirements were divided among the resident experts and those committee members in the respective areas as early as June 2006. Most of the needed information has not been received for inclusion into the new plan. Examples of some of the Plan of Actions include:

1. Develop plan for Flu Clinic and Ward
2. Develop staffing contingency plans including staff infected to recovery from influenza
3. Develop alternative nursing plan
4. Develop visitor access plan
5. Develop a strategy for just in time training of non-clinical staff
6. Develop triggers for bed capacity expansion

7. Prepare educational material on psychosocial issues for
healthcare workers and volunteer force

Good progress in the plan has been made in front gate and access screening, list of non-essential and essential medical services related to pandemic flu response, and the pandemic flu exercise infections control checklist. Additionally, although the Jackson Park Church and other buildings at Puget Sound Naval Station and Bangor Submarine Base have been chosen as good sites to send the overflow of influenza patients to, due to the size, availability, and layout of the buildings, there have been no further plans for setting up cots, communications, or the delivering of healthcare services (V. Crescenzi, personal communication, October 16, 2006). According to Commanding Officer, Naval Base Kitsap (2006), the Navy Region Northwest Naval Base Kitsap Emergency Management Standard Operating Procedure designates the Jackson Park Community and Youth/Teen Centers as a save-haven. Additionally, the Admiral Borda Center, The Litehouse, Gym, Chapel, and Fleet & Family Support Center on Bangor Submarine Base are designated as save-havens as well as both gyms and Olympic Lodge at Bremerton Naval Shipyard. A safe-haven is further defined "as a pre-designated facility not publicly identified for use as temporary protection. The location is usually not certified, insured, supplied, or

regularly staffed" (p. 1). There are also no official agreements for short or long term medical shelters or secondary care sites.

The actual medical services and healthcare rendered for influenza infected people is already determined through medical standards of care and protocols. Access to these services and healthcare resources may be the major obstacle during a pandemic. Development of a good pandemic response plan will aid the ability to provide the needed healthcare services. Although the Naval Hospital Pandemic Flu Planning Group has met every Monday for the last couple of months, little progress has been made in finalizing the new plan revisions. Slow progress of other Navy MTF Pandemic Plans has also been noted during the biweekly NAVMEDWEST teleconferences.

Directional Strategies

Naval Hospital Bremerton (n.d.) states the mission of Naval Hospital Bremerton is that "Naval Hospital Bremerton will improve the health of the people we serve through patient-centered care, provide Graduate Medical Education for Family Physicians, and execute our Readiness Mission." The Vision is "Your Preferred Choice." The hospital states that its mission and vision accomplishments will be guided by the principles of people, teamwork, integrity, quality, safety, and customer service. The hospital's mission and vision statement do not directly represent disaster or emergency preparedness but it is

considered to fall under the umbrella of the current mission statement. This may lead to some thinking it is not a primary goal for the hospital or increase the possibility that emergency preparedness is not part of the organizational culture. The Executive Board Agenda does show that there will be an Environment of Care briefing to them late November. Hopefully, since emergency management falls under the Environment of Care Department, it will be discussed at this time. Additionally there was no mention of Environment of Care or the Emergency Management Program on the 2006 Strategic Plan Annual Objectives.

The Disaster Preparedness Plan does have a mission statement of its own (Commander, Naval Hospital Bremerton, 2004).

1. To receive mass casualties effectively.
2. To provide medical personnel, equipment and supplies to support disaster recovery efforts.
3. To monitor decontamination and treatment of radiological or hazardous material casualties.
4. To recover from a variety of disaster situations that could affect the command.
5. To provide support by following the guidance set in the following three priorities (p. 4).

The emergency management plan was created from the requirements delineated by BUMED. This is the only real requirement that

Naval Hospital Bremerton has towards it emergency management program but takes other variables into consideration with its plan. The last revision of the BUMED instruction, NAVMEDCOMINST 3440.4 is dated March 28, 1989 (Commander, Naval Medical Command, 1989).

Discussion

The four most critical strengths and weakness must be identified in order to decide which strategies should be used in the emergency management program.

Probably the greatest strength would be the experience and dedication that the current Emergency Management Officer has toward the program, his awareness of its importance, and his relationship as an uplink to the Executive Board. The other greatest strengths include good working relationships through abilities and willingness to cooperate with external agencies, and the communication and security capabilities of the program.

The first of the four greatest weaknesses may be the lack of a full time person dedicated only to the program and its execution. This may be leading to the lack of meeting JCAHO requirements and other inspections. The next three weaknesses are probably the lack of a COOP Plan, chemical response capability, and the lack of a long range training and program execution plan.

Strategies to Pursue

Directional Strategies

Emphasis should be placed upon the program both internally and externally. This can be done through command directional strategies. The mission of the emergency management program should be advertised in greater depth to the command. This will help to make emergency preparedness part of the organizational culture of the hospital. It will ensure that emergency preparedness is part of the everyday operations of its staff. This can start with adding the emergency management program to the Environment of Care website. There is currently no reference. This might indicate where the priorities of the program are from those who are responsible for it. Also its mission and vision could be stated here as well as why it is important and what staff should be doing so that they will never be caught off guard and will always be ready for a disaster or emergency? The hospital can also state the importance of family preparedness and show that they are concerned about it. They can set up family preparedness training, links, and checklists on this website.

Adaptive Strategies

The tools used for the adaptive strategies are the Product Life Cycle Analysis and the Needs/Capacity Program Evaluation. The following adaptive strategies came from a Product Life Cycle

Analysis. The Product Life Cycle of emergency management and preparedness is deemed to be between the growth and maturity stage of the introduction, growth, maturity, and decline stages. There seems to be enough emphasis and guidance for emergency preparedness to use maintenance adaptive strategies as the program is in the maturity stage, but with many lacking programs, such as the COOP, Pandemic Flu, and chemical response, many aspects of the program may cause consideration of expansion adaptive strategies as these parts of the program may seem to be in the growth stage. They may be seen in the growth stage because they require more resources and are possibly an individual program under emergency management. Applying two different stages of the Product Life Cycle require using a mix of the adaptive strategies. In the growth stage of the emergency management program there is a need for product development and related diversification, development of the programs, and integration of them into the current plan; i.e. the COOP, Pandemic Flu plan and chemical decontamination abilities. This may be best accomplished with expansion adaptive strategies. Through the use of these strategies Naval Hospital Bremerton can expand its scope. This expansion of scope can be done through internal market and product development through policies and instructions and related diversification. Within the maturity stage of the emergency management program there is a need for

maintenance strategies to include maintaining the status quo of the already working aspects of the program; the drills and exercises and collaboration with external agencies. There is also a need for enhancement of other areas, i.e. updating the Emergency Management Plan. This should start by going back to the base framework and requirements and ensuring that we are doing what is required and then ensure we are doing it efficiently and effectively. This will have to start with guidance dissection and analysis. This strategy is backed by the suggestions through the adaptive strategy of Program Evaluation using a Needs/Capacity method. The need for the community for Naval Hospital to be prepared may seem low, but in reality it will be at its highest in a disaster. The capacity of the hospital, however, as compared to other local agencies will be low to moderate due to its size and capabilities. The adaptive strategies of high community need and low organizational capacity lead us to use enhancement and status quo decisions. These are for the same reasons and annotated above for the Product Life Cycle.

Market Entry Strategies

The market entry strategies will help Naval Hospital Bremerton decide on how to purchase, cooperate with others, or develop its emergency management program. In order to determine the appropriateness of the market entry strategies selected, an

evaluation of external conditions was conducted as described in Exhibit 7-16 of Swayne, Duncan, & Ginter (2006, p. 314). Figure 11 below is an amalgam of the information provided in Exhibit 7-16 as described above.

	Stage in Product Life Cycle	\$ to enter market	Speed required due to demand/market conditions	Attractiveness
Acquisition	Early	\$\$\$	X	
Licensing	Early	\$\$	X	
Venture Capital Investment	Early			
Merger		\$\$		
Alliance	Mature			X
Joint Venture	Pre	\$\$		X
Internal Development	Early			X
Internal Venture	Pre		X	

External Conditions:

Figure 11. Swayne, Duncan, & Ginter (2006): Market Entry Strategic Analysis due to external conditions.

To help decide the desired strategies of the Product Life Cycle, capital needed to enter the market, and the speed needed to enter the market were taken into consideration. The appropriate market strategies would seem to be alliances, joint ventures, and internal development. This may be possible in a modified sense of alliances and joint ventures. The Naval Hospital will benefit from an alliance with outside organizations in regards to emergency management. Resources and capabilities beyond the scope of Naval Hospital Bremerton are being accomplished by using outside organizations. Funding for

this is made via government reimbursements. If the resources of Naval Hospital Bremerton are overwhelmed the alliances with Harrison Hospital and the Harbor View Medical system are used. These organizations have similar and complementary resources but greater capabilities--such as bed capacity. The alliances will also satisfy the need to control the flow of patients and to coordinate skills between organizations. There is no current memorandum-of-understanding for alliances with Naval Hospital Bremerton. The use of NDMS will provide the guidance if activated. Additionally, the use of public emergency transportation or the transportation capabilities of other facilities will have to be used as Naval Hospital Bremerton has none. Alliances are currently being practiced while the different organizations participate in joint exercises and drills. Joint ventures can be considered as the working together of hospitals toward the emergency response during a disaster and would be used when additional resources are needed or there is not enough time, money or perceived need to establish the needed skills or expertise (Swayne, Duncan, & Ginter, 2006). Naval Hospital Bremerton will not buy into a joint venture but NDMS is a federally guaranteed reimbursement contract. Hospitals who agree to participate are guaranteed federal reimbursement for the patients they accept to their inpatient facility.

The greatest initial impact from market entry strategies will probably be gained from internal development. This will promote operational capacity, service management expertise, and help to form a strong functional organization. The emergency management program needs total review and updating. It may even be considered to be at its early development stage and requiring a high level of quality control to get the new plan on track using all internal and external influences.

Competitive Strategies

To help select the appropriate posture strategy the table below was created using various descriptors of the external environment and their relationship to various postures extrapolated from Swayne, Duncan, & Ginter (2006).

	External Environment Type	PLC	Rivalry	Entry Barriers	Change
Defender	Stable	Mature/long	Fierce	High	Predictable and slow
Prospector	Turbulent	Intro or Early	Low	Low	Rapid
Analyzer	Moderate changing	Growth or Mature	Some		Potential
Reactor					

Figure 12. Swayne, Duncan, & Ginter (2006): Competitive Strategic Analysis due to external conditions.

There are moderate changes to the requirements of the emergency management program and, as stated before, it is considered to be in between the growth and maturity stage of the Product life Cycle. There is usually minimal rivalry in this program as most healthcare facilities will try to work together and share resources during a disaster and emergency response to save as many lives as possible and aid in recovery of the disaster. This leads to a plausible competitive strategy of Analyzer. The Analyzer will:

1. Have the ability to mix high levels of standardization and routinization [sic] of core products and markets with flexibility and adaptation for new products
2. Structure accommodates both stable and dynamic areas of operation
3. Effective and lateral communication channels
4. Effective strategy and planning team

(Swayne, Duncan, & Ginter, 2006, p. 320)

Probably the only reasonable position strategy would be focus. The hospital needs to remain focused on the emergency management program and not allow the importance of maintaining the program to get lost due to costs.

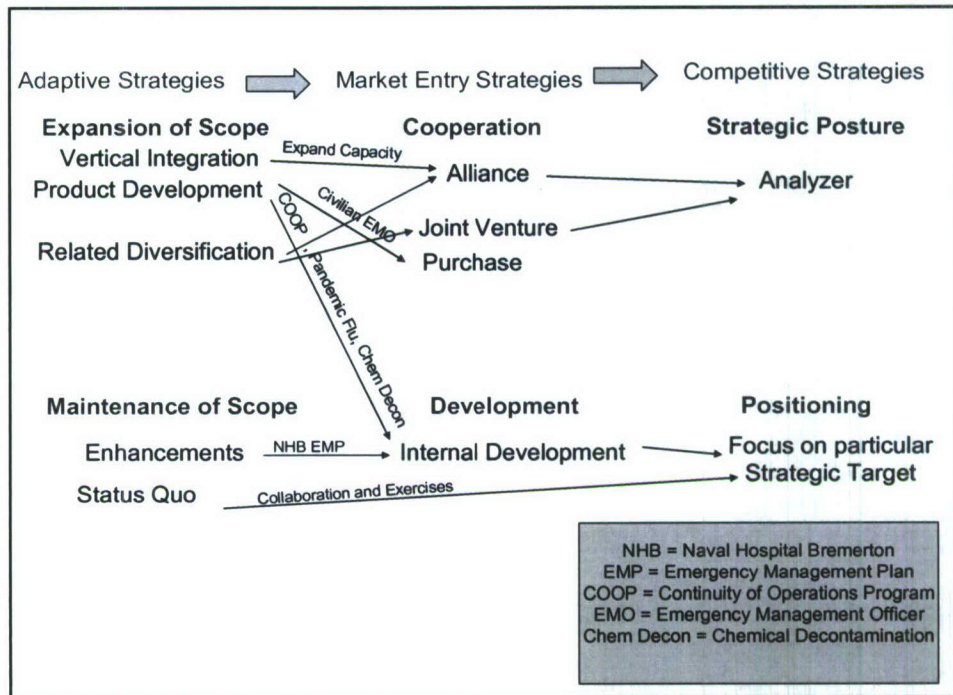


Figure 13. Swayne, Duncan, & Ginter (2006): Strategic Map for Naval Hospital Bremerton's Emergency Management Program

Figure 13 is a proposed strategy map for strategically managing Naval Hospital Bremerton's Emergency Management Program. This map takes the proposed strategies and puts them into a visually explainable format.

The first thing that should be addressed is the updating of the Emergency Management Plan and the Disaster Response Plan. This is done through a Maintenance of Scope Adaptive Strategy and is done through internal development of each plan. The hospital should then use an Adaptive Strategy of Expansion of Scope to internally develop a Continuity of Operations Plan, Pandemic Flu Plan, and increase the capabilities of chemical

decontamination. It should continue to vertically integrate through alliances to expand healthcare services and capacity during emergency response and continue related diversification through "pseudo" joint venture and alliances. Strategic posture should be as an Analyzer, continuing to analyze the Emergency Management Program and continuing changes and adapting accordingly. Finally, they should position themselves for continued focus on the emergency management program and constantly strive to enhance it. They can use Status Quo strategies for the collaborative efforts and joint exercises with external emergency organizations.

It is suggested that the program start with plan revision and development. The reason for this is that the hospital cannot effectively know where the Emergency Management Program is if they do not know the requirements. After the requirements are delineated then the emergency management program can be tailored to the hospital. The plans will then be tailored to those emergencies and possible disasters that are identified in the vulnerability analysis. The latest vulnerability analysis for Naval Hospital Bremerton was done in 2005 and ranked by a value of relative risk. The relative risk is a percentage that is calculated by multiplying variables of the likelihood that the hazard would occur to variables of severity of the consequences caused by the hazard. The severity was further broken down into

the magnitude of the impact towards the human, property, and business aspects subtracted by mitigation efforts and response variables. The highest relative risk for natural occurring events for Naval Hospital Bremerton was assigned to an earthquake. Next were black ice, high winds, and heavy snowfall. All of these were natural hazards and processes for mitigation and response to these hazards are straight forward. The top three human related hazards, aside from decreased staff due to the deployment of Fleet Hospital personnel, were the identification of a suspicious package, a mass casualty incident, and acts of terrorism. These threats make it more difficult to write guidance and policy. There are numerous other variables to take into account and usually will require collaboration with other organizations and the use of more resources. Although a few in the hospital may know most of what is going on within the program, emergency management is most effective when everyone who is involved is familiar with it and can respond accordingly. The organization, as a whole, is the emergency management team—not just a few select individuals. There has to be current and updated guidance to make this as effective as possible.

The Continuity of Operation Plan and Pandemic Flu plan will require that numerous people work together. There is already a NAVMEDWEST Pandemic Flu Committee hashing out issues and plan

development. The Continuity of Operations Plan will require many brainstorming sessions and may be a good candidate to be devised using a Failure Mode Effect Analysis. This analysis technique analyzes the failures modes of a program or process, identifies the effects of those failures, and proposes fixes before the failures can happen (Six Sigma, n.d.).

Service delivery strategies

As discussed beginning on page 39, the modified Healthcare Value Chain of Swayne, Duncan, & Ginter (2006) will be used to help decide what value adding Service Delivery and Support Delivery strategies can be used to aim the emergency management program in the right direction, get it on track, and keep it there. Remember that service delivery pre-service is the planning, funding, and training. Point-of-service is the actual disaster response or drill scenario. After-Service can be debriefing, lessons learned, fixing inadequacies or getting needed resources.

The pre-service value adding strategies reap the greatest rewards for the emergency management program as preparedness is the key to its success.

Possibly one of the most critical service delivery strategies to change for Naval Hospital Bremerton revolves around planning. They need to take a complete look at its Emergency Management Program. A format like that in Appendix D

would be helpful so that all areas are spelled out and nothing is missed. Responsible parties could then be tasked with review of their areas, the giving of feedback, debating on suggestions, and imposing changes. The Program needs to have all the parts and pieces, address the right areas, and be up to date with all the current literature, guidance, and direction.

This enormous task may be better served by either hiring a civilian contracted employee to run the emergency management program or at least allowing a non-deployable active duty military member who will be at the command for a prolonged period of time to run this program. Naval Hospital Oak Harbor had one full-time employee with two assistants review and revise their Emergency Management Plan and Disaster Preparedness Plan and it took approximately six months (R. Morash, personal communication, September 30, 2006). This task would also include the creation or refinement of a COOP plan, chemical response capabilities, and a long range training plan.

The second most critical delivery strategy that should be changed is related to training. All hospital staff need to be properly indoctrinated and trained on external and internal requirements and individual job descriptions and assignments during a disaster response. These tasks need to become second nature. Through this training and conditioning, improvements can and should be made to the existing plans and job descriptions.

Employees and their family members may even be better educated and prepared for personal issues during the time of need. When family members are taken care of, then the command will get better and more complete support during a disaster from its staff.

A lack of documentation exists for Naval Hospital Bremerton's current long range delivery strategies plan. This should be written down for quick reference and constant review and to help keep the program on track. A sample 24 month training plan is be seen in Appendix H.

Support Delivery Strategies

Under support activities, organizational culture, organizational structure, and strategic resources are all important to emergency preparedness. The organizational culture will encompass shared assumptions and values of emergency preparedness and behavioral norms. Organizational structure will include facility and equipment resources, implementation of leadership roles, and the ability of leadership to carry those roles out. Finally, the strategic resources will include the finances, adequate numbers of people, the training of those people, and technology.

The most critical support delivery strategies may revolve around changing the organizational culture in regards to emergency management. Everyone from the top executive to the

front-line employee needs to have awareness and buy-in into emergency management requirements for it to become part of the organizational culture. When emergency management is part of the organizational culture, the completion of tasks and employee attitudes and awareness will be second nature when dealing with all the issues surrounding it. Employees will want to be part of the team and accept emergency management and preparedness as part of their life at work. The support delivery of organizational culture can be enhanced through training and improvements in awareness. Initially, the hospital needs to make sure that the organization knows that emergency management and preparedness are a priority. This can be done by integrating emergency preparedness into the strategic and business objectives for the hospital and marketing emergency preparedness to the organization through training sessions, seminars, and the hospital intranet. The hospital could set up an emergency preparedness week with posters and information. Training offered to hospital staff on family preparedness will increase awareness and also serve to keep the hospital better prepared when there is a need to respond. If the organization shows that they care about the family members then the staff will be better prepared to come to work, leave their family behind and care about the mission of hospital. There is already a Staff Education and Training Department and training is a continuing event. Training

provided includes initial and annual refresher training in numerous medical and non-medical subjects for all hospital staff. Training subjects range from cardio pulmonary resuscitation and advanced trauma life support to team building and department head leadership courses. These training efforts should continue and aim toward enhancing emergency preparedness throughout the hospital as well.

The second most important Support Delivery Strategy will probably be organizational structure which will include facility and equipment resources, implementation of leadership roles, and the ability of leadership to carry those roles out. After the resources are obtained and leadership can carry out their roles, then the training of its personnel will be of utmost importance. Currently there is no Continuity of Operations Plan.

Organizational structure must be obtained before that can be completed. This can be done through alliance type and resource sharing agreements with the Jackson Park Church, Community Center, and Day Care Center, and various buildings at Puget Sound Naval Shipyard and Bangor Submarine Base. This has to be identified for further resource identification for communications and transportation of patients and staff, needed medical equipment, and healthcare delivery resources. The Pandemic Flu Plan is also affected by lack of these resources as continuity of operations is part of a pandemic response.

Finally, the ability of leadership to carry out its roles will come from the guidance and policies of the hospital. Specifically this will be the Emergency Management Plan, Disaster Response Plan, Continuity of Operations Plan, Pandemic Flu Plan, and other appropriate policy.

Potential Strategies

A potential strategy that the hospital could use is a Program Priority Setting strategy. This is effective for not-for-profit organizations to rank their programs according to the perceived needs of the community and concentrate on those programs that will give the most return to the community it serves (Swayne, Duncan, & Ginter, 2006). This may allow the hospital to see how much importance it places on emergency management and what it perceives as more, or less, important. It may also allow the hospital to focus on the other programs it feels are more important to the mission of the hospital. It is likely, however, that it will view this program as very high priority and will want to get it up to speed as quickly as possible.

Future efforts should also concentrate on aligning Naval Hospital Bremerton's Emergency Management Plan and Disaster Preparedness Plan to the new and upcoming requirements of Bureau of Medicine and Surgery. A draft of further changes are proposed in the Chief, Bureau of Medicine and Surgery (2006a) and

graphically represented in Appendix D. These changes would include:

1. Establish personnel categorization.
2. Implement tiered group designations and resource allocation.
3. Continue with program and threat assessments ensure, enhance, and maintain interoperability with external organizations.
4. Strive for preparedness through expert planning, training at newly designated tier levels, acquiring and maintaining proper equipment and supplies, and performing exercises and evaluations.
5. Continue to work on mitigation and prevention techniques.
6. Ensure issues for response and recovery are addressed.
7. Sustain the program and execute it.

These areas should be also considered even with the current revisions of Naval Hospital Bremerton policy and guidance.

Conclusion

Naval Hospital Bremerton is not as prepared as they should be to respond to a man-made or natural disaster. Knowing this information is the first step to making it happen and this research can benefit Naval Hospital Bremerton by summarizing some of the shortfalls in their Emergency Management Program. Strides should be made as soon as practical to enhance the

preparedness of their Emergency Management Program and the information in Appendix I could be used as a starting point for this by looking first at the base framework for their guidance and policy compliance requirements. The threats are real and continue to persist. Natural disasters cannot be predicted and the threats of terrorism have increased over the years. The more prepared the hospital is to respond to such incidents the better! Preparedness also prevents reactive crisis management response to disasters and creates an environment for better healthcare outcomes. The stakeholders in preparedness for emergencies and disasters include the entire staff, executive leadership, and partnerships in the local community.

Nothing bad can be gained through increasing knowledge; in emergency preparedness any gained knowledge can lead to recommendations for improvement. Other organizations or agencies can follow the good business practices of Naval Hospital Bremerton to achieve the best preparedness possible as well.

The results of this research can be used by the emergency management program members and executive leadership to focus needed energy and resources to certain areas of the program by using the findings and recommendations for improvement. Emergency management should be transformed from "good practice" to a required and standard healthcare business practice.

It would be interesting to be able to apply a dollar value to preparedness in future studies. This is beyond the scope of this research and it would be difficult to agree on a method to apply a dollar figure to people's health and lives. Life cannot be given back once taken; preparedness is the key to saving it.

Recommendations

First, Naval Hospital Bremerton needs to get organized. The entire emergency management program and all guidance and requirements need to be identified, laid out and put down on paper for easy reference. The guidance further needs to be melded into one reference which will be continually updated and a checklist could be formed to track compliance of all requirements. This will also give the Executive Board a non-static view of where the program is and what is constantly going on to improve or maintain it. Next, Naval Hospital Bremerton's Emergency Management Plan and Disaster Preparedness Plan need to be updated and be in-line with current guidance. After this, a short and long range plan or Plan of Actions and Milestones can be developed. This should include completion of a JCAHO self assessment, preparations for the upcoming JCAHO accreditation inspection, enhancement of decontamination capabilities, development of a Continuity of Operation and Pandemic Flu Plan, and projection of future training and community exercises. When this is completed, all hospital personnel need to be informed

and trained on their duties and responsibilities relating to emergency management and preparedness. This training needs to be done from the top executive to the front line worker; including hospital support staff. Training exercises and drills need to be done to assess the knowledge and skills of hospital staff and further training needs to be completed as deemed appropriate from those assessments. Training exercises should continue beyond minimum requirements until the Executive Board is satisfied that everyone in the hospital is proficient in emergency preparedness and disaster management. Efforts should also be put in place to help the hospital staff accept emergency management as part of the organizational culture. They can follow the suggestion for accomplishment of this in this paper or develop their own strategies. All of these recommendations can be done better and faster with a full time Emergency Management Officer. Naval Hospital Bremerton should try to make this happen; at least until the current issues are resolved and a reassessment can be done for future program requirements.

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Appendix A

Definition of Terms & Acronyms

AT- Antiterrorism

BUMED- Bureau of Medicine and Surgery

CBIRF- Chemical-Biological Incident Response Force

CINC- Commander, Navy Installations Command

CO- Commanding Officer. The equivalent to Chief Executive Officer (CEO) in a civilian medical facility.

COOP- Continuity of Operation Program- A program that develops a plan that is used for moving the operations of an organization to another location if the primary location is deemed unsafe or undesirable to continue operations in that place but it is still necessary to provide the service of that organization or agency.

DHS- Department of Homeland Security

ELMRS - Emergency Land Mobile Radio System

EM- Emergency Management

EMO- Emergency Management Officer. The person responsible at a Military Treatment Facility for the Emergency Management Program.

EMP- Emergency Management Program

FCC- Federal Coordinating Center

FEMA- Federal Emergency Management Agency

FHP- Force Health Protection

JCAHO- Joint Commission on Accreditation of Healthcare
Organizations

KCDEM- Kitsap County Department of Emergency Management

MTF- Military Treatment Facility. Any one or multiple medical
facilities under a single or Commanding Officer or Officer-
in-Charge.

NAVMEDWEST- Navy Medicine West. The Navy regional medical
support office responsible for all west coast and Pacific
area Military Treatment Facilities.

NDMS- National Disaster Medical System

NIMS- Nation Incident Management System. Doctrine developed and
administered by the Director of Homeland Security that
gives "concepts, principles, and organizational processes
to enable effective, efficient, and collaborative incident
management at all levels" (U.S. Department of Homeland
Security, 2004a, p. ix).

NMCSD- Naval Medical Center San Diego

NMOHS- Navy Medicine Office of Homeland Security. The Navy
Medicine representative to the Department of Homeland
Security.

NRSW- Navy Region Southwest

ROC- Regional Operations Center

SWOT- Strengths, Weaknesses, Opportunities, and Threats

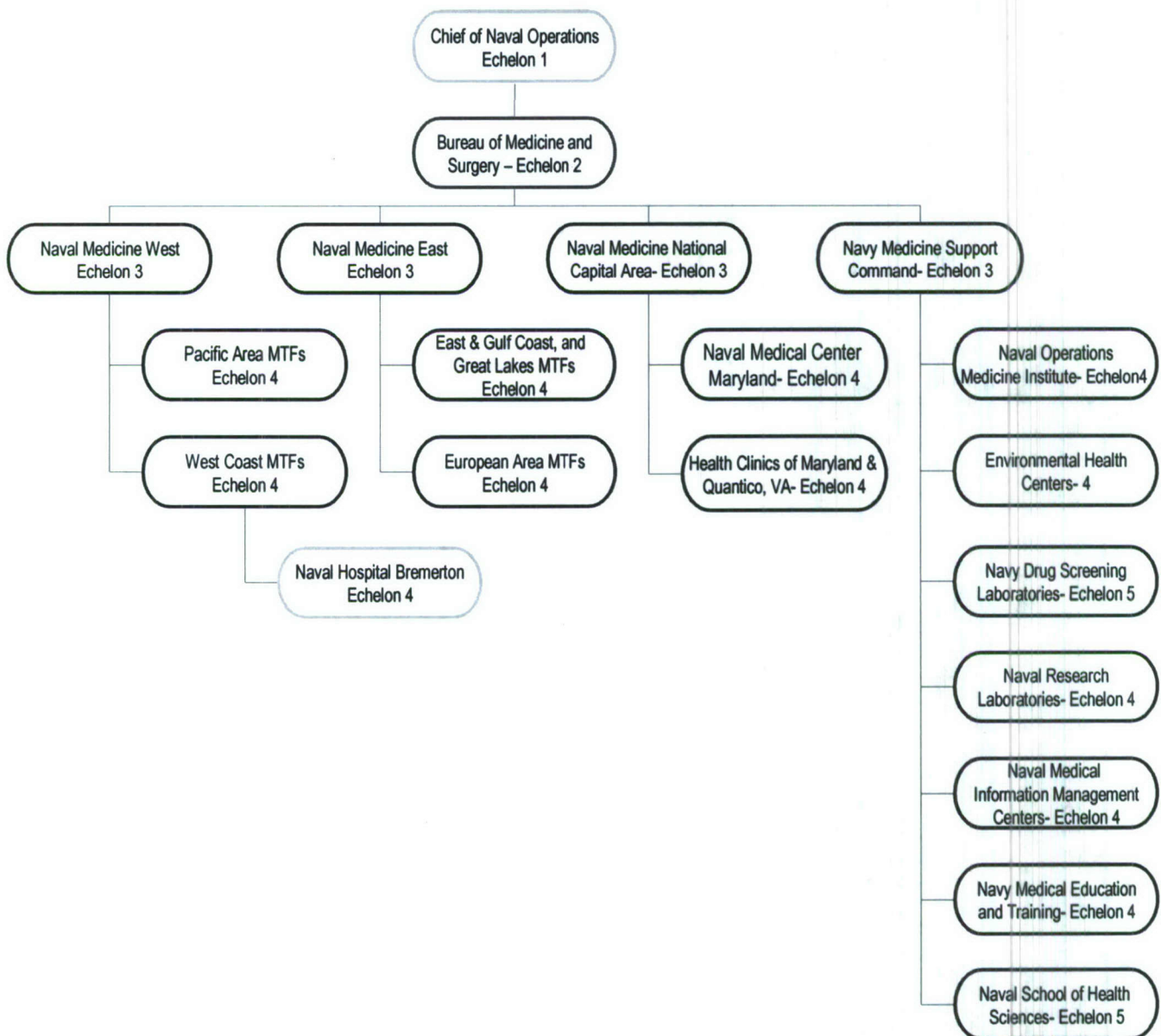
USAMRICD- U.S. Army Research Institute of Chemical Defense

USAMRIID- U.S. Army Medical Research Institute for Infectious
Diseases

Appendix B

The following chart was developed from information within Chief of Naval Operations Notices 5450.239, 5450.245, 5450.250. These can be found in the reference list as Chief of Naval Operations (2005a, 2005b, & 2005c)

Navy Medicine
Command & Support Organizational Chart (revised Nov 2005)



Appendix C

Naval Medicine Command activities are defined into nine categories. These activities are defined as follows and are transcribed verbatim as described in NAVMED Policy 06-002 Chief (Bureau of Medicine and Surgery, 2006, p. 1-2).

1. Navy Medicine Regional Command (Region). Echelon III commands, responsible for command and control of support activities.

2. Naval Medical Center (NMC). Major tertiary teaching hospitals with multiple residency training programs providing a broad scope of inpatient and outpatient services.

3. Family Practice Teaching Hospitals (FPTH). Training hospitals with multiple specialty services and a family practice residency training program providing inpatient and outpatient services.

4. Naval Hospital (NH). Community hospitals with a limited scope of outpatient and inpatient services. No Graduate Medical Education Programs.

5. Naval Health Clinic (NHC). Healthcare treatment facilities with limited outpatient specialty services providing no inpatient care.

6. Branch Health Clinic (BHC). Branch clinic with medical or both medical and dental capabilities; subordinate to a large facility.

7. Naval Dental Center (NDC). Full range of dental services; multiple subordinate branch dental clinics. Only used at Camp Pendleton, Camp Lejeune and Okinawa.

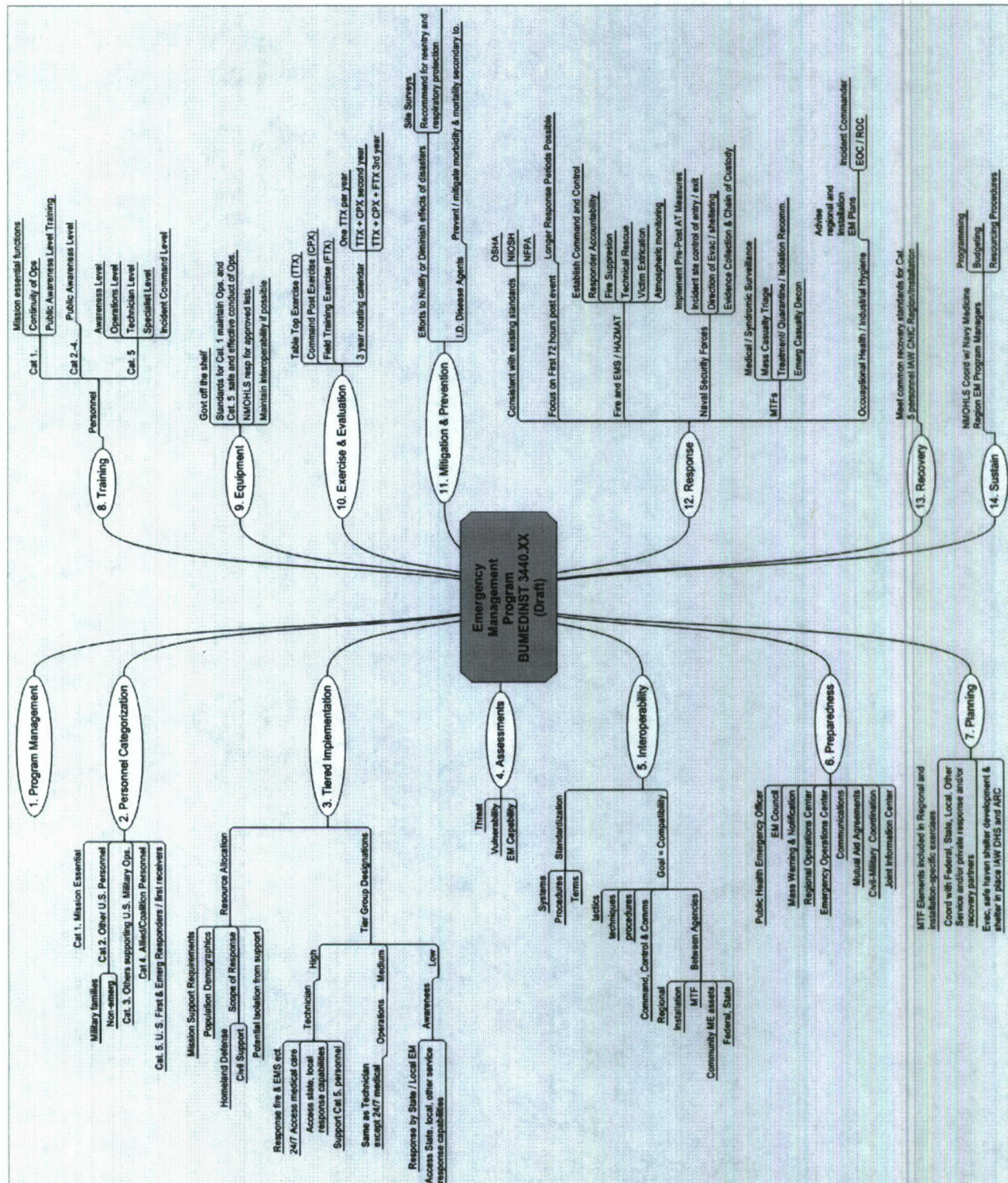
8. Branch Dental Clinic (BDC). General dentistry clinic, subordinate to a large facility. Not co-located with medical capability.

9. Mission Specific (MS) Commands. Commands with non-health service missions.

Appendix D

Mind-Map developed using Emergency Management Program BUMEDINST

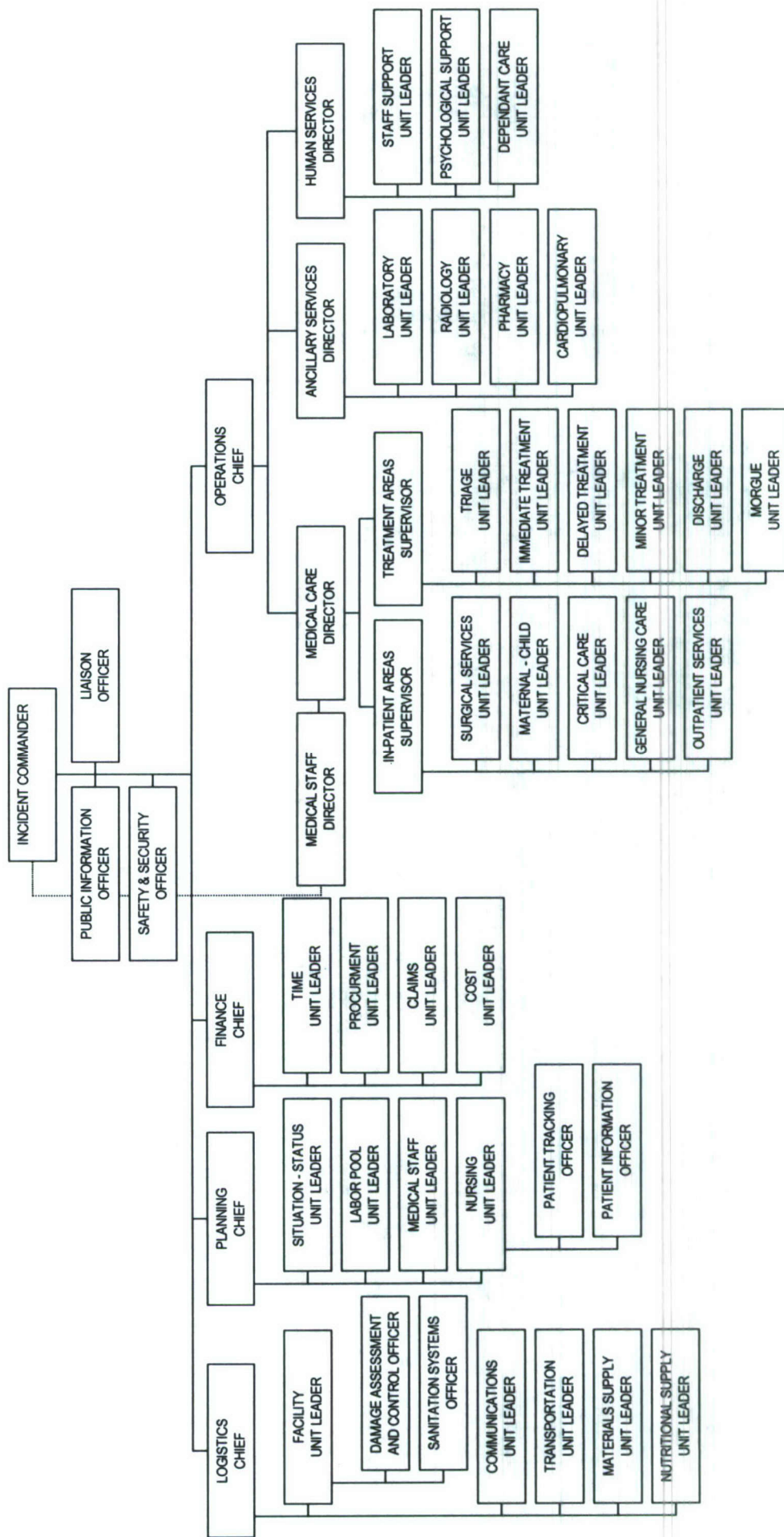
3440.XX (Draft) (Chief, Bureau of Medicine and Surgery, 2006a).



Appendix E

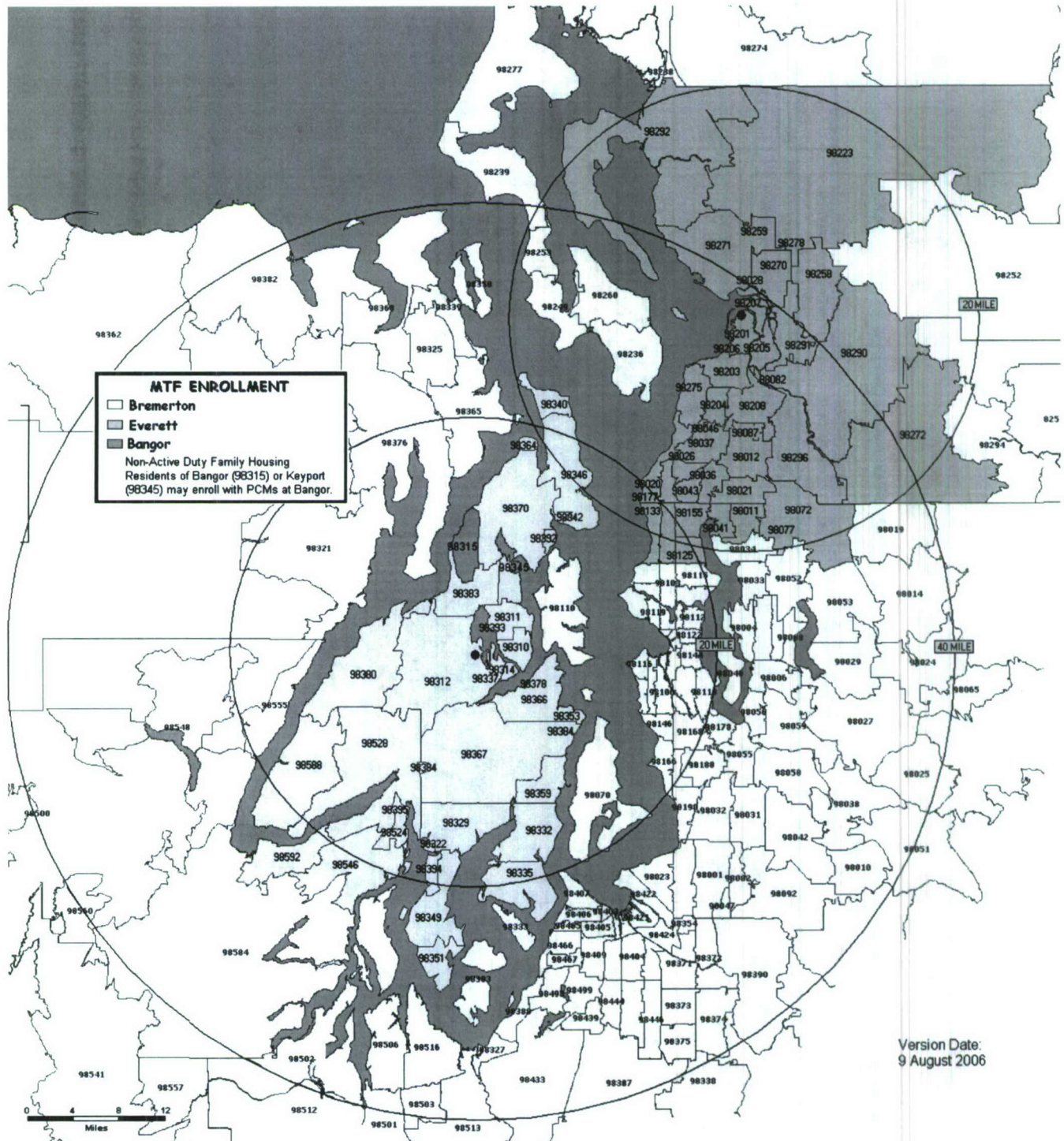
Generic Hospital Emergency Incident Command System template provided by San Mateo County
 Department of Health Services Emergency Medical Services Agency (1998).

HOSPITAL EMERGENCY INCIDENT COMMAND SYSTEM



Appendix F

Naval Hospital Bremerton Intranet: Naval Hospital Bremerton's
Eligibility and Enrollment Map.



Appendix G

The source for this checklist is Commander, Naval Medical Command (1989), Enclosure (3). Any referenced material within this checklist can be found within this instruction.

PROPOSED CHECKLIST FOR A DISASTER PREPAREDNESS PLAN

1. Is the plan classified (normally should not be necessary)?
2. Does the plan list the references on which it is based and pertinent points included in the plan?
3. Are the annexes referenced within the basic plan?
4. Are the assumptions on which the plan is based valid or necessary?
5. Is the concept of operations reasonable?
6. Does the plan provide an Internal Disaster Plan to cope with emergency situations within the facility? For MTFs, is there a provision for patient evacuation from one part of the facility to another, and a provision for evacuation of the entire facility?
7. Are annexes included for specific disasters (i.e., fire, flood, chemical or hazard waste spill, NBC accident, terrorist activity, etc.)? Are they adequate for the level of planning required?
8. Is a command and control center designated and outfitted

with the necessary communications gear? Is an alternate center designated?

9. Is there an annex on training? Does it assign responsibilities and tasks? Does it include training for the triage team? Does it include training for admission procedures during mass casualty situations? Does it include training for disaster control teams? Does it provide for training in assembly of team material?

10. Does the plan provide for shelters? Does it list location, capacity, shelter manager and alternate, etc?

11. Is an area map included? A station map? Do they show traffic patterns for getting on and off the base during an emergency?

12. Are warning signals listed? Are they compatible with civil defense signals?

13. Does the plan provide for recall and assembly of personnel?

14. Does the plan outline measures to be implemented on receipt of a disaster or attack warning?

15. Does the plan explain how, when, and by whom it will be activated?

16. Does the plan provide for succession to command?

17. Does the plan clearly indicate lines of command authority? Are organizational charts used?

18. Does the plan provide adequate information and procedures for supply and resupply of the facility during emergency conditions?

19. Does the plan provide information and procedures for monitoring and decontamination of patients? Does the plan indicate the location of medical material for casualties? Is any other information on NBC warfare necessary?

20. Does the plan contain an annex on disaster control teams which lists responsibilities and provide a tactical organization which will function during disaster or attack? Are team equipment listings and responsibilities for assembly included? Is there a provision for central coordination control of these teams? What transportation will be provided?

21. What provisions are made for emergency sources of power and water?

22. Does the plan provide for a realistic and functional triage center where casualties are screened? What communications to the wards, operating room, x-ray, surplus personnel pool, blood bank, and command center are provided? Is there a planned traffic pattern for triaged patients out of the triage center and into treatment or waiting areas?

23. What provisions are made for reception of relatives and public media? Is there a public affairs annex, detailing the structure, organization, and reporting responsibilities of a

CIB? General organization and planning standards for a CIB are contained in article 0311 of reference (e).

24. Is there a provision for emergency operation of the blood bank and emergency expansion of blood collection capability?

25. Are provisions for emergency food service included in the plan?

26. What provisions are made for accelerated admission procedures in emergencies? What procedures are made for starting the clinical chart for each patient during a mass casualty situation?

27. Is the plan thoroughly coordinated with the inpatient and outpatient aspects of the hospital?

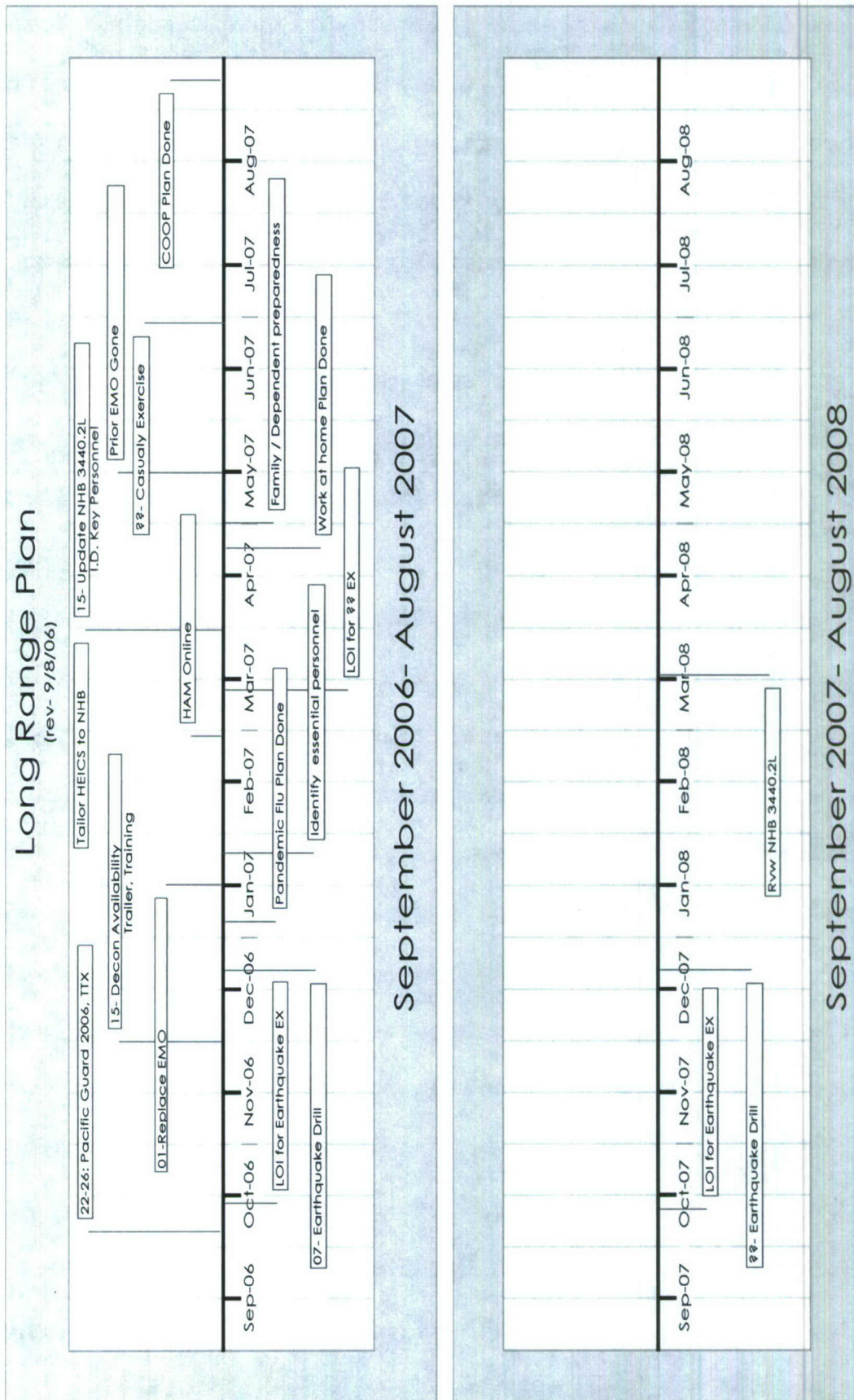
28. Is the basic plan brief and to the point? If not, what information may be removed from the basic and included with the annexes? Is there any superfluous information in the annexes?

29. Was every consideration given to the proper use of medical and dental personnel?

30. Is the plan worded in a clear and understandable manner? Was it proofread before printing? Is the final copy (printing, paper, covers) of good quality?

Appendix H

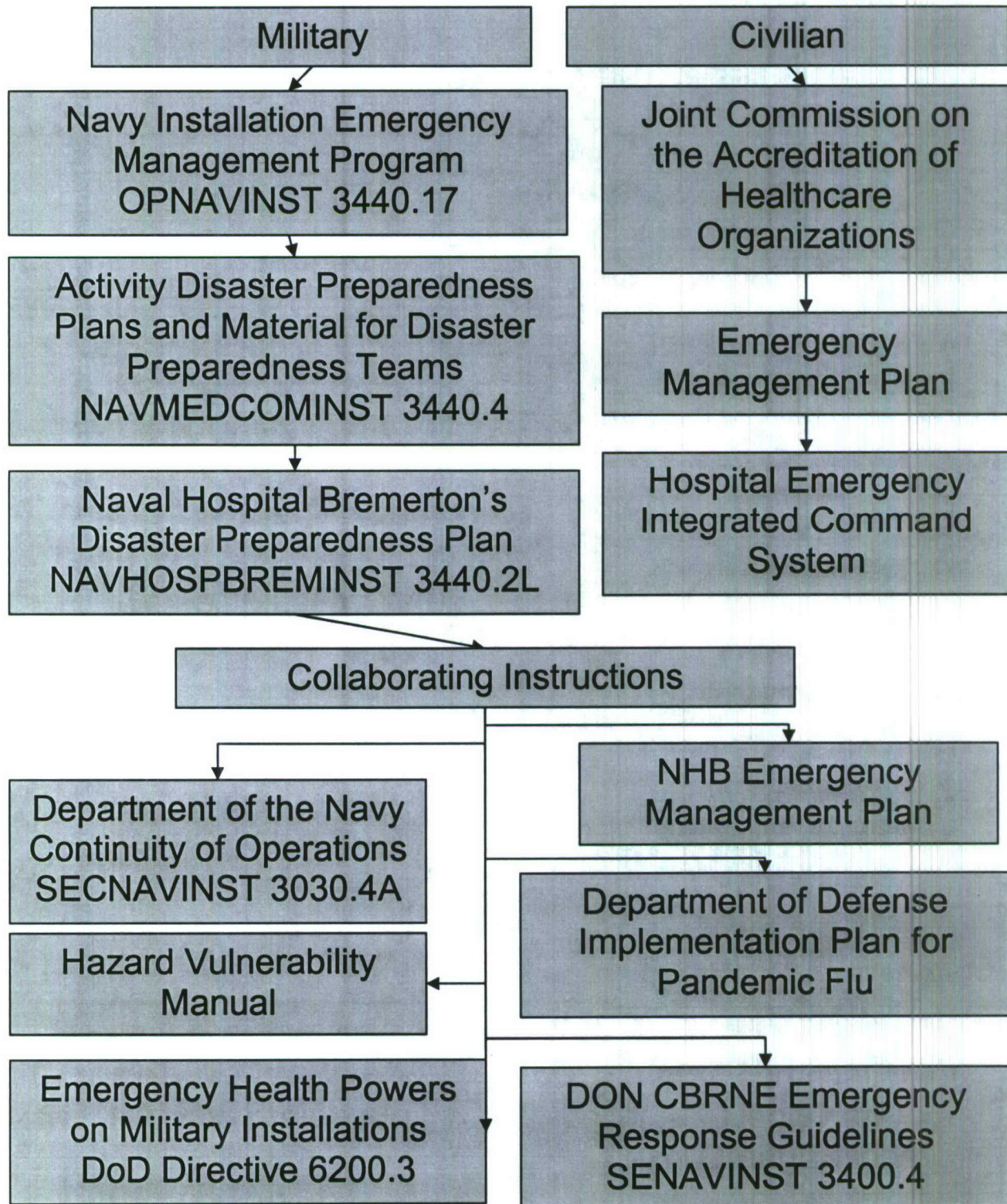
Sample 24 Month Long Range Plan for Emergency Management Milestones



Appendix I

Naval Hospital Bremerton Emergency Management Program

Framework of Guidance and Policy.



Activity Disaster Preparedness Plans and Material for Disaster Preparedness Teams

NAVMEDCOMINST 3440.4

→ The healthcare organization must assign a disaster preparedness officer and staff

→ The inpatient facilities must have a detailed plan for handling mass casualties

→ Each inpatient facility must participate in a mass casualty exercise, at least twice annually, one must be a command wide drill and the movement of casualties from outside the hospital to inside the facility must be part of the exercise

→ Those facilities supporting radiological programs will develop specific plans for emergency response to them

→ The facility will designate a Disaster Control Team, identify medical material and equipment to support them, and ensure they are compliant with the Blood Program

Naval Hospital Bremerton's Disaster Preparedness Plan

NAVHOSPBREMINST 3440.2L

Disaster preparedness committee will meet twice monthly, provide detailed debriefs after each drill, and ensure program changes are communicated to hospital staff

Disaster response plan activated semi-annually

Personnel recall activated once per quarter.

Each drill will have criteria based evaluation as listed

Directors, Department Heads and Division Officers shall be familiar with Disaster Preparedness requirement

Subordinate military healthcare facilities will ensure local preparedness plans are in line with Naval Hospital Bremerton's instruction

All Naval Hospital Bremerton staff will be familiar with the Basic Preparedness Plan within this instruction

This plan will be reviewed annually by the Disaster Preparedness Committee

Joint Commission on the Accreditation of Healthcare Organizations (JCAHO)

Hospital conducts a Hazard Vulnerability Analysis (HVA)

Hospital establishes with the community

Priorities of emergencies of HVA

Hospital role in communitywide emergency

"All Hazards" Command Structure linked to community command structure

Hospital develops and maintains emergency management plan and implements when appropriate

EMP developed with hospital leaders and medical staff

EMP specifies mitigation, preparedness, response, and recovery strategies, actions, and responsibilities for each priority emergency

EMP provides processes for initiating response and recovery phases of plan including description of how, when, and by whom phases are initiated

JCAHO Continued (1)

JCAHO Continued (1)

EMP provides process of notifying staff when emergency response measures initiated

EMP has process for notifying external authorities

EMP has process for identifying and assigning staff to cover all essential staff functions

EMP has process for managing:

Activities related to care, treatment and services

Staff support activities

Communications with media

Staff family support activities

Critical supplies logistics

Communication with patients

Security

EMP has process for evacuation (horizontal & vertical)

EMP has process for establishing alternative care site including processes for:

Transportation of patients, staff, & equip, patient necessities, tracking of patients and inter-facility communication from hospital to site

EMP has process for identifying providers and other personnel during emergencies

JCAHO Continued (2)

JCAHO Continued (2)

EMP provides process for cooperative planning with health care organizations together providing services to geographic area that facilitates sharing:

Names and roles of individuals and command structure and command center telephone numbers

Resources and Assets that could potentially be shared

Names of patients and deceased brought to hospital

EMP identifies alternate roles & responsibilities of staff during emergencies, including to whom they report in hospital's command structure and, when activated, in the community command structure

EMP identifies backup internal and external communications

EMP Identifies alternate means of meeting essential building utilities (water, ventilation, fuel sources, med gas)

EMP identifies means of radioactive, biological, and chemical isolation and decontamination